

A FIRST APPROACH TO ECONOMICS

for
INDIAN READERS

III E 169

BY

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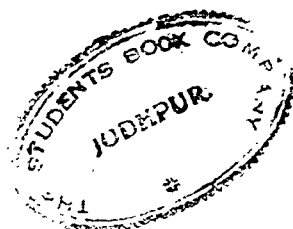
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FIRST EDITION 1926
SECOND EDITION 1937
THIRD EDITION 1940
FOURTH EDITION 1942

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PUBLISHED BY KASHMIRI PUBLISHING HOUSE, AGRA

PREFACE TO THE FOURTH EDITION

For making this Edition more useful, special care has been taken in revision to give latest available facts and figures. The latest Census figures for 1941 have been incorporated wherever possible.

An independent Chapter—"Appendix I—Important Economic and Industrial War Measures"—has been added at the end of the book in order to apprise the student of the many-sided important problems being tackled by the Government of India since the outbreak of the war with the Axis Powers, and we hope that the information contained therein will prove of immense help in understanding the true significance of the numerous schemes and measures introduced by the Government for the successful prosecution of the war and its glorious conclusion.

We indeed thank our friends and teachers for the constant help given to us in sending their valuable suggestions for improvements in the book.

BIKANER,
July 15, 1942.

R. K. SHARMA
S. S. NIRVAN

PREFACE TO THE THIRD EDITION

We have expanded and thoroughly revised the edition in the light of the suggestions received from friends and teachers in the various provinces. Many additions, viz., new chapters on family budgets and rural development of India, the organisation of rural development in U. P., the agricultural and industrial development in U. P., the budget of the Bombay Province, the Tenancy Act of 1939 and many new blocks indicating Indian conditions have been made. All the facts and statistics have been brought up to date.

We expect that this new edition will prove very useful to those for whom it is made.

We are grateful to all our friends who have given their valuable advice to us.

NAINI TAL
June 4, 1940

R. K. SHARMA
S. S. NIRVAN

PREFACE TO THE SECOND EDITION

This edition which we now place before our readers has been thoroughly re-arranged and expanded. It embodies some valuable additions, viz., a brief survey of the Indian currency, income and consumption in India, efficiency of Indian labour, provincial budgets of the Central Provinces, and the Punjab and many new diagrams and blocks indicating Indian conditions. Every effort has been made to deal with all the important spheres of economic activities at the present day, with special reference to India. Up-to-date statistics that throw a flood of light on conditions obtaining today have been incorporated wherever necessary.

Other new matters have been introduced in the light of the various suggestions received from friends and teachers in the United Provinces and Rajputana Colleges. We are confident that the book will prove extremely useful to those for whom it is intended.

We take this opportunity of acknowledging our deep obligations to those friends who have sent us their valuable suggestions.

BAREILLY COLLEGE
July 5, 1937

R. K. SHARMA
S. S. NIRYAN

PREFACE TO THE FIRST EDITION

Economics, which the prophets of the Nineteenth Century denounced as the 'dismal science,' is now recognized as the most important of sociological studies. In the industrial countries of the West, a knowledge of Economics is considered one of the prime necessities for understanding the *milieu* of life as it has evolved to-day from the incipient civilization. The problems which the Great War has set loose upon the world—such as the bankruptcy of nations, frozen credit and failing banks, the flight of the Pound or the Franc from the gold standard, the stupendous riddle of unemployment, the increasing recurrence and intensity of strikes—are and all may be directly traceable to the faulty systems of production, distribution and exchange. Even the Japanese occupation of Manchuria and the Italian aggression in Abyssinia can be explained and accounted for on a purely economic basis—the pressure of population and the consequent need for raw materials.

At any rate, this is certain, that a thorough understanding of Economics is absolutely essential for a fuller appreciation of the conditions of modern life. It is an indispensable part of a citizen's education. In India, in particular, where the social as well as the political orders are being re-shaped, it is all the more necessary to study Economics in relation to the peculiar social conditions.

This book is an attempt to give a concise, clear and unbiassed survey of the subject-matter of Economics for less advanced students. It covers

practically the whole syllabus of the Intermediate Examination in Economics as laid down by the Indian Universities and the various Boards of Intermediate Education. The students will find it extremely useful at all stages of their work, as economic theories have been discussed not only from purely academic point of view but also in their application to special Indian conditions. If we succeed in creating in the students a genuine interest in the study of Economics and its impact on life, we will consider ourselves amply rewarded.

Our sincere thanks are due to Mr. N. K. Chaddha, M.A., LL.B., Lecturer in Economics, Bareilly College for his many kind suggestions, and ungrudging help.

BAREILLY COLLEGE
May 15, 1936

R. K. SHARMA
S. S. NIRVAN

CONTENTS

CHAPTER I

	PAGES
SUBJECT-MATTER OF ECONOMICS	1-25
Definition of Economics ; Scope of Economics ; Divisions of Economics ; Relation of Introduction to other departments ; Relation of Consumption and Production ; Relation of Consumption and Exchange ; Relation of Consumption and Distribution ; Relation of Consumption and Public Finance ; Relation of Production and Exchange ; Relation of Production and Distribution ; Relation of Production and Public Finance ; Relation of Distribution and Public Finance ; Relation of Economics to other Sciences ; Economics and Sociology ; Economics and Ethics ; Economics and Psychology ; Economics and Politics ; Economics and Economic History ; Economics and Statistics ; Economics and Physical Sciences ; The Nature of Economic Laws ; Methods of Economics ; Usefulness of the study of Economics ; Theoretical Importance of Economics ; Practical Importance of Economics.	

CHAPTER II

GOODS AND WEALTH	26-31
Goods ; Wealth ; Individual's Wealth ; National Wealth ; Cosmopolitan or International Wealth.	

CHAPTER III

THE DEVELOPMENT OF ECONOMIC LIFE	32-38
The Hunting and the Fishing Stage ; The Pastoral or the Nomadic Stage ; The Agricultural Stage ; The Handicraft Stage ; The Industrial Stage.	

CHAPTER IV

CONSUMPTION

MAN'S WANTS AND THEIR SATISFACTION	39-58
What is Consumption ; Importance of Consumption ; Relation of Wants and Activities ; Characteristics of Human wants—Human wants are unlimited in number ; Wants are	

limited in capacity, Wants are competitive, Wants are complementary etc, Some apparent exceptions! Different kinds of wants—Urgency Attractiveness and Durability, Classification of wants (i) Necessaries (ii) Comforts (iii) Luxuries, The standard of Living The standard of Living in India

CHAPTER V

✓ UTILITY

59-75

The definition of Utility, The Law of Diminishing Utility, Meaning of other things being equal Exceptions to the Law of Diminishing Utility Marginal utility, Total utility, Consumer's surplus, The Law of Equi Marginal utility or the Law of Substitution or distributing the income Table explaining the Law of Equi marginal Utility.

CHAPTER VI

DEMAND AND SUPPLY ✓

76-89

✓ The meaning of Demand, The Law of Demand, The demand schedule, Systems of demand—joint demand and composite demand, Increase in demand, Elasticity of demand, Variations in the elasticity of demand—1 The demand for necessities is usually inelastic, while for comforts and luxuries it is elastic 2 influence of variety of uses 3 influence of substitutes 4 influence of habits 5 influence of prices and 6 influence of distribution of wealth, Meaning of Supply, The Law of Supply, The Supply Schedule, Uses of demand and supply schedules

CHAPTER VII

ECONOMICS OF SPENDING AND SAVING

90-106

What spending denotes? A historical survey of spending—the hawking system weekly or bi weekly markets fairs and exhibitions and the modern organized markets, General principles of spending—the method of spending and the prices of goods and services that we purchase for consumption, Relation of saving to spending—merits and demerits of saving and spending The social side of spending, Spending and the producers Spending and Idlers The problem of luxuries—(i) Good points about luxuries, (ii) Luxuries which are socially condemnable and unjustifiable (iii) Are works of arts luxuries, What is waste

CHAPTER VIII

FAMILY BUDGETS

107-125

Details of the Budget of Consumption, Family Budgets

and their Usefulness; Nature of Consumption and Income in India; Diet of the Indian People; Average yearly Consumption in England and India Compared. Individual Income; Agricultural Families; Non-Agricultural Families.

CHAPTER IX

PRODUCTION 126-134

What is Production—form utility, time utility, place utility, service utility; Classification of Productive occupation; Factors of production,—land, labour, capital, organization and enterprise; Essential factors of production; Efficiency of the factors of production.

CHAPTER X

LAND 135-143

Definition of the term; Characteristics of land; What land does for production; Extensive and intensive cultivation; Transportation and agriculture; Effect of nature on production—relief, climate, rainfall, soil, coast-line, and situation.

CHAPTER XI

NATURAL ENVIRONMENT AND RESOURCES OF INDIA ... 144-185

Geographical location; Climate and rainfall; GEOGRAPHICAL DIVISIONS OF INDIA,—the Himalaya Mountain region; The Indo-Gangetic Plain; the Deccan Plateau and the Coastal strips; The Variety of soils in India,—alluvial, the Deccan trap and the crystalline; Soil erosion—its prevention; PRODUCTS OF LAND—I. Agricultural products, (a) Food crops—rice, wheat, barley, maize, millets, pulses, fruits, vegetables and sugar (b) non-food crops—cotton, jute, oil-seeds, tea, coffee, indigo, tobacco, opium and cinchona. II. Mineral products—coal, iron, petroleum, gold, manganese, mica, saltpetre, zinc, and salt. III. Forests—their different kinds; Utility of forests; Classification and administration of forests,—reserved, protected and unclassed; SOURCES OF POWER—coal, wood-fuel, oil, wind-power, water-power; Hydro-Electric Schemes in India—Mysore installation, Kashmir project, Tata Hydro-Electric Schemes—The Ganges Canal Hydro-Electric Schemes, The Mandi project in the Punjab; Effects on the Economic Activities of the People; Animal Resources; Pisciculture.

CHAPTER XII

LABOUR 186-215

What Labour means; Productive and Unproductive labour; Malthusian doctrine of population; Qualifications of the

Malthusian doctrine Efficiency of labour—Supply of labour, physical strength intellectual strength and moral strength, HUMAN FACTOR IN INDIA Factors determining the density of population—Rainfall and climate configuration and fertility of the soil irrigation transport freedom from enemies industrial development Density and distribution of population Growth of population, Vocational distribution of population, Health and vital statistics Efficiency of labour in India

CHAPTER XIII

CAPITAL

216-268

Definition of capital Origin of capital Forms of capital, Functions of capital in modern production—the provision of subsistence the provision of appliances and the provision of materials Efficiency of capital Is land capital Growth of wealth and capital—the power or ability to save the will to save and the opportunities to save, Machinery—its advantages and disadvantages. CAPITAL IN INDIA Agricultural capital, Large scale manufacture—cotton sugar jute woollen steel and iron, tanning and leather match paper glass industries MEANS OF COMMUNICATION AND TRANSPORT Road Transport Railroad competition The present position Railways—Their advantages—political social and economic Disadvantages Waterways, IRRIGATION A paramount necessity Classification of irrigation works Well irrigation or lift works Tanks and storage works Canals—the Sukkur Barrage and canals scheme, The Sutlej valley works The Sarda Oudh canals The Cauvery Reservoir project Area irrigated by canals and the value of crops raised Irrigational works conditioned by natural factors, Advantages of irrigation, Defects of canal irrigation, A Greater Need.

CHAPTER XIV

ORGANIZATION

269-313

The organiser—his importance and necessity Efficiency of organization DIVISION OF LABOUR Forms of division of labour, Its advantages and disadvantages, Extent of the division of labour LOCALIZATION OF INDUSTRIES Causes of the localization of industries—nearness of raw materials nearness to power physical and climatic conditions accessibility to markets momentum of an early start Advantages of localization Disadvantages of localization, THE SCALE OF PRODUCTION Advantages of large scale production, Limitations of large scale production Small scale production and its advantages Scale of production in agriculture, Advantages and disadvantages of large scale Farming Farming in India,

Vitality of cottage industries in India ; Their present system of organization ; Importance of Cottage industries ; Suggestions for improvement ; AGRICULTURAL AND INDUSTRIAL DEVELOPMENT IN U. P. ; MARKETING OF AGRICULTURAL PRODUCE ; FORMS OF BUSINESS ORGANIZATION—The single entrepreneur system ; Partnership ; Joint-stock Companies ; Co-operative Production ; Labour Co-partnership and Profit-sharing, Governmental Enterprise ; LAWS OF RETURNS.—The Law of Diminishing Returns ; Limitations ; Causes of—the operation of Diminishing Returns in agriculture ; Extent of Applicability ; Agriculture, fisheries, mines, building sites, manufactures ; Forces Counteracting the Law of Diminishing Returns ; The Law of Increasing Returns, The Law of Constant Returns ; DIAGRAMMATIC REPRESENTATION OF THE LAWS OF RETURNS.

CHAPTER XV

RURAL DEVELOPMENT IN INDIA	... .. 314-336
General survey ; Removal of illiteracy ; Development of means of transport and communication ; Reorganization and establishment of cottage industries ; regulation of currency and exchange ; Defects in agricultural production and their removal ; Increased water facilities ; manures ; improved seeds ; implements ; vegetable and fruit culture ; pests and plant diseases ; consolidation of holdings ; marketing facilities ; co-operative societies ; live-stock and dairy industry ; schools and education facilities. ORGANIZATION OF RURAL DEVELOPMENT SCHEME IN U. P.	

CHAPTER XVI

EXCHANGE	... .. 337-345
The meaning and necessity of exchange ; Advantages of Exchange ; The forms of exchange—I. Barter—its inconveniences. (i) Lack of double coincidence of wants ; (ii) the awkwardness of accommodating units of sales to units of purchases. (iii) want of a common denominator of value. II. Sale and purchase ; Both parties gain in utility by exchange ; The meaning of value and price ; The machinery of exchange.	

CHAPTER XVII

MARKETS	... .. 346-353
Definition of a market ; The evolution of markets—(i) localization of markets, (ii) dealing by sample, (iii) dealing by grade, and (iv) specialization of markets ; classification of markets—Place markets, and Time markets ; Boundaries of a market ; Conditions of a wide market—1. Universality of	

demand, 2 Portability 3. Suitability for grading and sampling 4. Imperishability, 5. Supply of the commodity.

CHAPTER XVIII

THEORIES OF VALUE

354-370

Determination of Price, The labour theory of value, The cost of production theory of value, The utility theory of value, Demand and supply theory of value, Equilibrium of demand and supply market price, Normal price, Short and long periods, The short period price, The long period price, SPECULATION.

CHAPTER XIX

MONEY

371-397

The evolution of money, Characteristics of a good commodity money, Functions of money, Definition of money, Coinage, Free and limited coinage, Classification of money, *Systems of currency*, *Monometallism*, *Bimetallism*, *Paper money*, Merits and defects of paper money, Gresham's Law, Appreciation and depreciation, Inflation and deflation of currency, Effects of appreciation and depreciation, Indian currency.

CHAPTER XX

CREDIT, BANKING AND TRADE

398-441

The meaning of credit, Importance and advantages of the credit system, Evils of credit system, Is credit capital? The mechanism of credit Credit instruments Promissory notes, Cheques, Bank drafts, Bill of exchange, Hundies, Banks and their functions, Various classes of Banks in the Indian market, Indigenous bankers, Imperial Bank of India Exchange banks, Indian Joint stock Banks Co-operative banks, Savings banks, Reserve Bank of India THE TRADE OF INDIA Growth of Indian trade, Chief characteristics of the foreign trade, Chief articles of import, Chief articles of export, The direction of India's trade, Internal trade, Inland trade, Coastal trade.

CHAPTER XXI

THE PROBLEM OF DISTRIBUTION

442-449

What is Distribution, What is to be distributed, The shares in Distribution, General theory of Distribution.

CHAPTER XXII

RENT	450-476
------	-----	-----	-----	-----	-----	-----	---------

The popular meaning of rent; Economic rent; Contract rent and its determination; How rent arises: Ricardian theory of Rent; Margin of cultivation Criticism of the Ricardian theory; Rent does not determine price; Rent of building sites; Rent of mines, quarries and fisheries; Factors affecting rent—(a) Improved methods of cultivation, (b) Improved means of transport, (c) An increase in population (d) The advance in civilization; The unearned increment of land; Applicability of the Law of Rent to India; Land tenures in the United Provinces; U. P. Tenancy Act of 1939; Ideal system of land tenure.

CHAPTER XXIII

WAGES	477-500
-------	-----	-----	-----	-----	-----	-----	---------

Wages defined; Nominal and real wages; Methods of wage payment; How wages are determined; Some peculiarities of labour; Trade Unions; Trade unionism in India; Reasons for the slow Progress in India; Mobility of labour; Mobility of labour leads to equality of wages; Hindrances to mobility of labour in India; The changing environments; Influence of social customs; The caste system; The joint family system; WAGES IN INDIA.

CHAPTER XXIV

INTEREST	501-518
----------	-----	-----	-----	-----	-----	-----	---------

The definition of interest; Gross and net interest—1. The reward for waiting or net or pure interest, insurance against risk of loss—*a.* trade risks, *b.* personal risk, The earnings of management. The problem of interest; Should interest be paid? Why interest is paid?—A reward for service; How the rate of interest is determined? The demand for capital; The supply of capital; The rate of interest; Different rates of interest; The tendency of the rate of interest to fall; Interest and rent; The causes and other peculiarities of interest rates in India. Mobility of Capital—1. Some theoretical considerations 2. Mobility of Capital as found in India.

CHAPTER XXV

RURAL INDEBTEDNESS IN INDIA	519-532
-----------------------------	-----	-----	-----	---------

Causes of rural indebtedness—the point of unremunerative character of agriculture from the business point of view is

brought forth—(i) the insecurity of harvests, (ii) the loss of cattle due to disease and famine, (iii) the excessive love of litigation, (iv) the money lender and the provision of credit, (v) the extravagance of the cultivator, (vi) ancestral debt, (vii) change in the economic position of the agriculturist, (viii) illiteracy, (ix) land revenue policy and indebtedness Remedial measures of the Government, What is co operation? Its historical backgrounds, Rural and urban societies, Primary agricultural societies—(i) size and area of operation, (ii) liability, (iii) management (iv) membership (v) funds of the societies, (vi) purpose and period of the loans, (vii) rate of interest, (viii) security for loans, (ix) audit, inspection and supervision, (x) division of profits, Effects of Co operative societies in India—Economic benefits, Moral effects Educative effects, Social effects, Administrative effects, Defects and drawbacks of co operation in India—(i) Absence of understanding of co operative principles, (ii) Illiteracy, (iii) Absence of thrift, (iv) defective audit, (v) High rates of interest, (vi) Inelasticity and inadequacy of co-operative finance, (vii) Government control, (viii) Predominance of agricultural credit societies.

CHAPTER XXVI

PROFITS

533-539

The nature of profits, The Tendency of Profits to fall, The constituents of profits—(a) Rewards of agents of production supplied by the entrepreneur, (b) Monopoly gains, (c) Chance profits, (d) Gains due to superior ability and risk undertaking.

CHAPTER XXVII

BUSINESS OPPORTUNITIES IN INDIA

540-558

Economy and efficiency—criteria of progress—the waste of natural, human and capital resources as going on in India is described, Industries awaiting development, Agriculture, Fruits and Vegetables, A survey and scope of industrialization, Textile Industries, Metallurgical Industries, Forest Industries, Chemical Industries, Leather Industries, Co-ordinated policies and programmes for a steady development of industrial activities is indispensable to avoid waste of effort

CHAPTER XXVIII

PUBLIC FINANCE

539-593

Its meaning and importance, Public and private expenditures compared; Sources of public revenue—1. Public or

State domains, 2. State enterprise, 3. Investments of the State, 4. Public loans, 5. Voluntary contributions, 6. Fines and penalties, 7. Revenue derived from the incomes of different persons and corporations; The meaning and nature of taxes; Principles or canons of taxation—1. Equality, 2. Certainty, 3. Convenience, 4. Economy, 5. Productivity, 6. Elasticity, 7. Simplicity. Kind of taxes—*direct* and *indirect* and *incidence*. Advantages and disadvantages of direct taxes. INDIAN FINANCE. Classification of Indian revenues; A. Central finance; Chief sources of revenue of the Central Government—1. Customs, 2. Income-tax, 3. Salt tax and Opium revenue, 4. Excise duties on matches and sugar, 5. Railways and irrigation, 6. Posts and telegraph; Chief heads of expenditure of the Central Government—1. Direct demands for the cost of collection of revenues; 2. Commercial services; 3. Debt charges; 4. Civil Administration; 5. Military charges. B. Provincial finance; General statement of revenue and expenditure of the United Provinces, the C. P. and Berar, the Punjab and the Bombay Province for 1941-42; Chief sources of revenue of the Provincial Governments—1. Land revenue, 2. Excise, 3. Stamps, 4. Forests, 5. Registration, 6. Irrigation, 7. Schedule taxes; Chief heads of expenditure of the Provincial Government—1. Direct demands on revenue; 2. General administration; 3. Police, 4. Education, 5. Medical relief and public health; 6. Industries, 7. Agriculture. C. Local finance; The functions of Municipal Boards—*i*. Public safety, *ii*. Health, *iii*. Convenience, and *iv*. Instruction; Sources of revenue of Municipal Boards—1. Taxes and rates; 2. Realizations under special acts; 3. Revenues from Municipal property and power; 4. Grants and contributions; 5. Miscellaneous. Statement of income and expenditure of a Municipality District Boards and their functions; Sources of revenue of District Boards. Statement of income and expenditure of a District Board Progress of Local Boards.

APPENDIX I

IMPORTANT ECONOMIC AND INDUSTRIAL WAR MEASURES

594-619

1. Produce more Food and other Materials; 2 Industries harnessed to war needs; 3. Munitions Production in India; 4. Industrial Research; 5. Technical Training Scheme; 6. War Risks Insurance; 7. Railways and the War; 8. Special control Measures regarding Price Control and Rationing; 9. Post-war Reconstruction in India.

APPENDIX II

SOME IMPOREANT QUESTIONS

... .. 620-629

LIST OF ILLUSTRATIONS

	PAGE
The Law of Diminishing Utility	62
Diagram Illustrating Diminishing Utility, Marginal Utility and Total Utility	67
Consumer's Surplus	70
The Law of Demand	77
The Demand Curve	80
Diagram Showing Increase in Demand	82
The Elastic Demand Curve	83
The Inelastic Demand Curve	84
Supply Curve	89
Graph Showing the Budget of Consumption	113
Graph Showing the Budget of Consumption	118
India (Rainfall)	147
Transport in the Himalayas	148
Area under Food and Non-Food Crops	156
Shares of Provinces in the total area (in acres) under principal crops in 1938-39	157
Transplanting rice seedlings from the nursery	158
India Showing Products	159
Collection of Tea leaves	166
Sketch-Map Showing Location of Principal Mines and Oil Fields in British India	169
Electrifying cattle feed with the hope that there will be a greater yield of milk	178
United Provinces Canals and Ganges Canal Hydro-Electric Grid	180
Electro-culture of Fruits	182
Map of India, Showing the Density of Population by Natural Divisions of Provinces and States	197
Distribution of Population by Occupations	207
Comparative Distribution of Occupations in the larger Pro- vinces	208
Bombay's New Buildings for labourers	213
Steam Tractor and Modern Plough at work	232
Sketch-Map Showing Distribution of Chief Factory In- dustries in British India	241
Net-making Industry	288
Cloth-Printing Industry	292

Chick-making Industry	...	...	...	...	294
Potter at work	.	.	...	...	308
Blue Pottery at Gwalior	.	.	.	...	308
Diminishing Returns or Increasing Costs			...	...	312
Increasing Returns or Diminishing Costs				...	313
Constant Returns	...	..	...	.	313
Determination of Market Price	...		...	..	363
Normal Price under Increasing Costs	.		...	.	367
Normal Price under Constant Costs			.		368
Normal Price under Decreasing Costs			368
Cost of Production	456

A
FIRST APPROACH TO ECONOMICS
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INDIAN READERS

CHAPTER I

SUBJECT-MATTER OF ECONOMICS

Definition of Economics

For almost every different object occupying space there is a separate science. Planetary motions, for instance, form the subject-matter of the science of astronomy. The science of metallurgy treats of the composition of metallic substances. Geology studies the history and composition of the earth. Biology carries on investigations in the realm of life forms and principles of plants and animals. Psychologists seek to understand human behaviour or consciousness. The subject-matter of Economics, in the same way, is man. Man, however, is the topic of discussion for a number of sciences. He figures in ethics, politics, psychology, biology, and in all social inquiries. Man remains engaged from morning till evening in all kinds of activities—religious, philanthropic, patriotic, social, and economic. Now all the activities of man do not fall within the province of Economics. Economics concerns itself only with man's economic activities. By economic activities are meant those human activities that direct themselves towards the creation, appropriation, and accumulation of wealth. Man's wealth-getting and wealth-spending activities alone, therefore, form the subject-matter of Economics. When a man is busy in doing things other than those concerning his livelihood he is behaving as a non-economic man. A tourist who climbs a mountain merely to enjoy the beauties of nature is not performing an economic activity, but the activity of the guide accompanying him is economic because he

climbs in the expectation of some reward. A musician who sings for pleasure is not performing an economic activity but the activity of one who sings for a reward is economic. The farmer, the smith, the carpenter, the shoe maker, etc., work not in sport but in order to earn their livelihood, hence they are carrying on economic activities. The activities of a lock maker are economic because he works to earn something thereby but King Louis XVI's activity in making locks was non economic because he made them for mere amusement. Between a man who rows for pleasure and a boatsman who rows to earn a living, between a girl who spends her evening at a ball and the dancer who appears in a ballet, there is definite difference—the first rows or dances, solely to row, or dance while the others do so to earn their living, and this is sufficient to call the activity of the former class non-economic and of the latter economic. Activities such as for love of country, love of art, pity, shame, religion, charity, etc., are not treated in Economics. Economics considers mankind as occupied solely in the making, exchanging, sharing, and using of wealth.

It must be emphasised, however, that Economics is a social science. That is, it deals with man in his relation to society. The economist is concerned with man only as a unit in society, as a member of a social organization, and not as an individual in isolation e.g. an ascetic who lives in solitude after renouncing the world. The actions, desires, and objects of a particular individual are of little importance to economic science. It is the average of the actions, desires, and objects of all members of society that matters. For instance, Economics does not study how wealth is produced and consumed by this individual or that but how wealth is produced, exchanged, distributed, and consumed in society. Thus, Economics may be defined as a social science which deals with wealth getting and wealth using activities of men. Economics studies both man and wealth, and it is not purely a science of wealth as understood and defined by earlier writers on Economics. Marshall observes "Political Economy or Economics is a study of mankind in the ordinary business of life, it examines that part of individual and social action which is most closely connected with the attainment and with

the use of the material requisites of well-being. Thus it is on the one side a study of wealth, and on the other, and more important side, a part of the study of man."

Scope of Economics

Before dealing with the scope of Economics and inquiring whether Economics should be dealt with as a science or as an art or as both, it is desirable to emphasise the distinction between a science and an art.

Any branch or department of systematized knowledge considered as a distinct field of investigation or object of study is science, e.g., the science of astronomy, chemistry, geology, botany, economics, politics, etc. A science deals only with the relations of cause and effect. It assumes nothing to be good and nothing to be evil. It does not start with the idea that something is desirable or undesirable; nor does it arrive at any such conclusion as its result. Its business is not to offer precepts or prescriptions. Its sole concern is to show why certain effects follow certain causes. Art in general consists of truths of science arranged in the most convenient order for practice. A system of rules or of organized modes of operation serving to facilitate the performance of certain actions is art, as, the art of building or engraving, the art of war, the art of navigation, etc. An art assumes that a certain thing is desirable or that a certain other thing is undesirable; that something is good or that something is evil. Its object is to ascertain how the good may be attained, or the evil avoided. Suppose someone goes to a chemist with a bottle of poison in his hand and inquires of him whether he should swallow the contents of that bottle. The chemist as a scientist cannot tell him what he should swallow or refrain from swallowing. He can only say that if the liquid is swallowed up he will experience such and such sensations and after so much time he will die. Similarly in regard to the payment of interest the science of Economics can only point out why interest is paid at all, and what determines the rate paid. Whether interest ought to be paid, and, if it ought, what constitutes a fair rate of interest is the sphere not of the science but of the art of Economics. (The business of giving advice regarding conduct is not that of the scientist but of an artist. A science merely teaches us to know and it is art that teaches us to do a thing.)

The scope of Economics can be found out only when we know whether it treats of the actual or the ideal. Is it a science concerned exclusively with the investigation of uniformities or sequences, or is it an art having for its object the determination of practical rules of action? What, for example, is the true problem of Economics in regard to the influence of competition on wages? Is it to investigate the exact nature of that influence? Or is it rather to determine how far the effects of competition can be morally approved, and to what extent it should be superseded by combination or governmental interference? Some economists are of the opinion that the function of Economics is to investigate facts and discover truths about them, not to prescribe rules of life. Economic laws are statements of facts, not practical precepts. Economics is, in other words, a science, not an art. It furnishes information as to the probable consequences of giving lines of action, but does not itself pass moral judgments, or pronounce what ought or what ought not to be. If Economics is treated as a science, it may be defined as the science which merely states the laws regulating the production and distribution of wealth, so far as they depend on man's activities. Some other economists, on the other hand, regard Economics as having a high ethical task, and as concerned with the most important problems of human life. The science is not merely to classify the motives that prompt to economic activity, it must also weigh and compare their moral merit. It must determine a standard of the right production and distribution of wealth, so that the demands of justice may be satisfied. It must set forth an ideal of economic development. If Economics is taken as an art, it may be defined as the art which points out the institutions and habits most conducive to the production and accumulation of wealth. It is, however, now generally agreed that in Economics the positive investigation of facts is not an end in itself, but is to be used as the basis of a practical inquiry. The function of Economics is not only to point out the scientific laws that actually control production and distribution but also to show how national production and distribution of wealth should be regulated. Economics is not solely concerned with the study of wealth, but its

investigations extend also to a consideration of matters which affect the welfare of man and of the community in which he lives. It has been shown that Economics in throwing light on practical problems and in indicating the best forms of economic organization has been serving humanity to a very great extent. Hence we see that the scope of Economics has been very much widened to-day. The economists of the present age, generally, treat it neither as a science alone, nor as an art alone, but both as a science and an art.

Divisions of Economics

For convenience of exposition and facility of study and analysis the subject-matter of Economics has been classified under the following heads :

(1) *Introduction* :—In the opening chapters usually an idea of the nature, scope, and usefulness of the science is given, certain technical terms which are used too frequently in the course of the discussion of the subject are explained; and the main topics with which the science is concerned are shown.

(2) *Consumption* :—The subject of human wants and their satisfaction by the use of wealth is comprehended in the economics of consumption. Under consumption we study and observe various phenomena, such as the characteristics and classification of wants, the Law of Equi-Marginal utility, consumer's surplus, the Law of Demand, etc.

(3) *Production* :—The economics of production contains the observation and analysis of the manner in which wealth is created by man. Various factors of production, *e. g.*, Land, Labour, Capital, Organization and Enterprise, and the laws and principles governing the various branches of production, are studied under this division of Economics.

(4) *Exchange* :—How each man is able to barter his own surplus products for those which form the surplus of others but which are of great use to him is studied in the economics of exchange. The study of exchange includes a consideration of problems such as the basis and forms of exchange, Theory of value and prices, the mechanism

of exchange-markets, money, credit, banking and domestic and international trade

(5) *Distribution* —How the national dividend or income is apportioned among the different factors of production—Land, Labour, Capital, Organization and Enterprise—is explained in the economics of distribution. The problem of distribution of total wealth between those who collaborate in its production is assuming greater importance in view of the growing consciousness among the people about its mal-distribution

(6) *Public Finance* Public Finance inquires how much wealth the government requires to fulfil its functions, how it obtains this wealth, and how it uses it. Here we study the principles of public revenues, public expenditure and the public debt incurred by the state in the discharge of those economic and other varied functions which now devolve upon the civilized governments

It should be noted, however, that there is no strict line of demarcation between the different departments mentioned above. They are all interrelated and interdependent and mutually act and react upon one another.

Relation of Introduction to other Departments

Without a proper understanding of the introductory portion it is difficult to grasp clearly the divisions of Economics which follow this portion. Unless one knows the subject-matter of Economics it is not possible to follow the topics dealing with consumption, production, etc., which are merely branches of Economics. Besides, certain technical terms like 'goods', 'wealth', etc., recur again and again even in portions other than those dealing with introduction, and unless one has grasped their full import from the very beginning it is not possible to follow any discussion in Economics clearly.

Relation of Consumption and Production

Consumption is the sole end and purpose of all production. The object of consumption is to derive utility by the destruction of the thing used. To replace this destruction of utility is the object of production. It is the consumption which gives stimulus to and directs the

course of production. The consumers are the controllers of production because it is upon their decisions that the supply of goods and services depends. An increased demand for a commodity stimulates the production of that commodity. The industrial activity of a nation can be increased mainly by the growth of men's objects of desire.

Production also affects consumption in its turn. If goods are not produced, there cannot be any consumption of them. Consumption is made possible because goods are produced. It is production which supplies the means by which man's wants are satisfied. The price of an article is as important as its utility in determining the quantity consumed. And the price of any article depends normally upon cost of production. If the cost of production of an article goes up, less of that article will, other things being the same, be consumed, and if the cost of production of the article goes down, more of that article will be consumed. And if the price (as a result of the very heavy cost of production) of the article becomes prohibitive, very little, if at all, of that commodity will be consumed. Thus production influences consumption.

Relation of Consumption and Exchange

If there were no exchange each man would have to subsist on what he could produce directly himself, using his own and no one else's instruments of production. As things are, however, no one lives only on what he has himself produced but each lives on what has been produced by a vast number of other persons. This is the result of exchanges. If people had no wants, there would be no exchange either and the whole machinery of exchange would collapse. Besides, exchange value (i.e., the ratio of the number of units of one commodity to the number of units of another commodity for which it exchanges) is considerably dependent upon 'utility'—the very basis of the economics of consumption. Utility is indispensable to exchange value. The exchange value of things is founded upon their utility, or upon our wants for them, or upon the use we can make of them.

Relation of Consumption and Distribution

The connection between the consumption and dis-

tribution of wealth is very intimate. The kind of articles selected by the consumer depends upon the amount of his income. It is the length of a man's purse that decides what things he will consume and in what quantity. If, however, there had been no wants to satisfy there would not have been any production, and if wealth had not been produced there would not have been anything to distribute. The amount of income that each factor of production gets from the national dividend is indirectly dependent upon the consumption of the people. If the standard of living of the people is high, which means if they want to consume more and better and varied kinds of goods, there will be greater production on the part of such a people, which will augment the national income. Similarly, if the standard of living of the people is low, less will be produced and consequently there will be less of that which has to be distributed. Thus we see that the national dividend or that which is distributed is ultimately dependent upon consumption.

Relation of Consumption and Public Finance

The Government (mainly by taxation) in certain cases exercises a great control over our consumption. In those cases where the consumer is not the best judge of his own real interests or of the real value of the articles consumed, the Government has controlled the production and sale of such articles. Thus in most countries the sale of intoxicants and the prescription of medicines have been placed under legal restraint *e.g.*, the prohibition scheme introduced lately by the Congress Governments, specially in the provinces of Bombay and Madras. At the same time also laws with detailed provisions have been enacted against various forms of adulteration of articles of consumption. The Government, if it likes, can make it impossible for the consumers to make use of a certain article by subjecting that article to a very heavy tax.

Consumption also can affect, and actually affects, public finance. In all cases of indirect taxation the income of the State is dependent upon the amount of goods consumed in a country. If more goods are consumed the Government's income from taxes increases,

and if less goods are consumed its income automatically goes down. The budgetary dislocations in most countries of the world are often due to the uncertainty of the income that the State expects from indirect taxes. Most of the activities of the Government can be paralysed if the consumers decide to make use of only small quantities of a few commodities. /

Relation of Production and Exchange

Men are able to devote themselves exclusively to one occupation because the product of that occupation can be exchanged for the products of other occupations. It follows therefore that production now-a-days is carried on primarily for the market and the process of production is not complete unless the commodity or service produced is placed into the hands of consumers through an elaborate process of Exchange. The division of labour, the localisation of industries, large-scale production, and the use of machinery, etc., have been rendered possible due to the practice of exchange. Production besides being dependent on exchanges also affects the machinery of exchange. If there had been no division of labour, no localisation of industries, etc., the problem of exchange would not have arisen at all. Only when each man took up the practice of producing one article the need for exchange arose.

Relation of Production and Distribution

Production affects distribution very considerably. That alone can be distributed which has been produced. The quantity of goods and services to be distributed is absolutely dependent upon the amount of goods and services produced in a country within a certain time. More or less is distributed according to more or less production. Distribution in its turn also influences production. The rich consume those luxuries, which, if wealth were equally distributed, would either be not produced at all or, at any rate, not to the same extent. Distribution affects also the productive capacity of a nation. If there is more equal distribution of wealth the efficiency of workers would increase because of their increased standard of comfort and this increased efficiency of the workers will enable them to produce more wealth. On the contrary, if the distribution of share in

the total wealth is not equitable to any class of producers, it may lead to adverse effects on the productive capacity of a country

✓ **Relation of Production and Public Finance**

No accumulation of capital and hence no production of wealth is possible in a country in the absence of security of life and property. And this security of life and property is provided to the people by the Government of that place. Production of wealth is further dependent to a great extent upon the proper development of the means of transportation and communication. It is the Government which provides and looks after the country's means of communication and transport. Production also depends upon the fiscal and other policies of the State. By levying taxes on raw materials and necessities of life, and by granting protection to the home industries Government can help considerably in the production of wealth in a country.

Production, however, also affects the public finance. The income of the Government is dependent upon the income of the people. If the people of a country do not choose to produce more wealth, the Government of that country can never prosper. If, on the other hand, people produce more wealth and are better off, the income of the Government will also increase and it will be in a better position to perform its functions efficiently.

✓ **Relation of Distribution and Public Finance**

In a communistic society where the total produce of the community is, by the agency of Government, distributed to individuals according to considerations of need, without regard to their ability, the part played by the State in the matter of distribution is quite obvious. Even in the existing individualistic system of distribution where the rights of private property are recognized, the Government, however, influences the distribution of wealth by guaranteeing minimum wages to workers at times, by recognizing the rights and efforts of labourers to raise wages by combinations against the employers, and by forcing the employers to contribute towards sickness, accident, and unemployment insurance schemes, etc., and tends to reduce the inequality of wealth of different classes through the levy of a higher

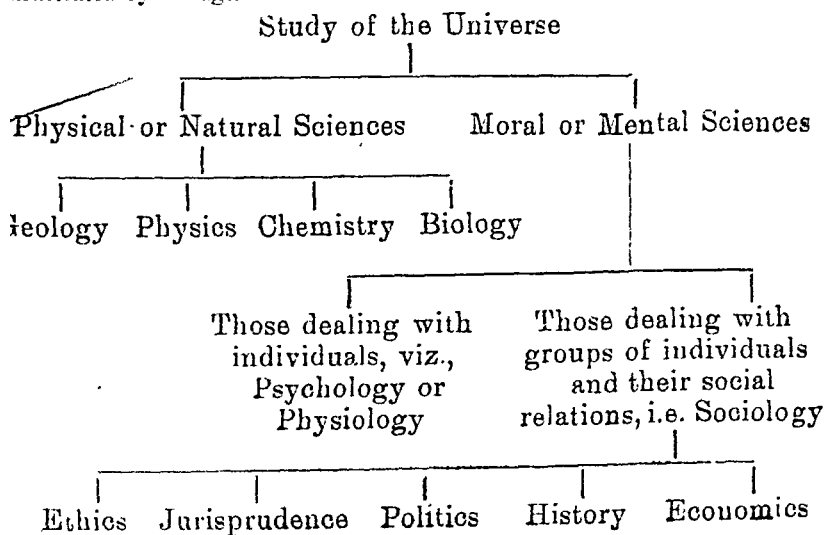
rate of taxation on richer classes, articles of luxury and so on. On the settlement of the questions concerning the division of the social income depends the peace of society. Errors concerning the law of distribution strengthen the hands of social agitators against the Government. If it were a general conviction that the national income is shared according to an unjust principle, no force could prevent an overturning of the existing form of Government in a country. Thus the problems of distribution and public finance are very closely connected with each other.

It must be quite evident now that the various branches of Economics cannot be divorced from one another, or discussed to any purpose in isolation.

Relation of Economics to other Sciences

For the purpose in hand it is convenient to divide the sciences into two great groups, namely, the moral or mental sciences (such as Politics, Ethics, Psychology, Economics, etc.) which have to do primarily with laws of mind, and the physical or natural sciences (such as Physics, Chemistry, Geology, Botany, Astronomy, etc.) which are primarily concerned with matter.*

*John Stuart Mill, one of the earlier economists of the classical school, classified the Study of the Universe in the following manner illustrated by a diagram—



Economics is closely related to almost all the sciences—whether mental or physical—of the world, but her relationship with the moral or mental sciences which deal primarily with man, is more intimate because it also has man as its subject matter. Let us see how Economics is related to some of these sciences of both kinds.

(Economics and Sociology

Sociology is that science which imparts the knowledge of the constitution phenomena, and development of the whole society. It is the Science of the associated life of humanity. The data of sociology consist of all social facts. Therefore, it is also termed as the science of Society or Social Science. Economics takes only one aspect of human society and action, it being concerned with man solely as a being who desires to possess wealth, and so it is a part of sociology. Economics treats of the laws of the production and distribution of wealth, not so far as they depend on all the phenomena of human nature, but only so far as they depend on the pursuit of wealth. Though the study of Economics is confined only to one particular point of view, it has necessarily to take account of facts that belong to other divisions of social inquiry. In solving the problems relating to the distribution of wealth men are not entirely concerned with the question of gain simply. Social surroundings, and other pecuniary motives also affect their decisions. The love of country, the love of power, the desire for personal esteem, public spirit, public opinion, sympathy, feelings of ill will and duty, prevalent ideas as to what is just and fair are some of the forces that exert a great influence upon the distribution of wealth. Wages are affected by combinations amongst the labouring classes also. The mobility of labour is affected by legislations of all kinds. The causes of variations in the supply of labour depend on the social, intellectual, and moral circumstances that determine men's standard of living as well as on such conditions as the price of necessities of life. The motives for the production and accumulation of wealth vary again in different instances. Industries at times have been stimulated purely by relig-

ious motives. (It is clear, therefore, that though in Economics the pursuit of wealth is the main force of which account is taken yet the facts of economic life are influenced by the various aspects of social life such as political and social institutions.

Economics and Ethics

Ethics is a system of moral principles; it is the science of the ideal human character. It tells us what a man ought to do according to moral principles. Economics studies the activities and behaviour of man in relation to wealth as a member of society and an economist's business is to describe more "what is" rather than to prescribe "what ought to be." But men's economic activities are often determined partly by moral considerations. No problem relating to human conduct can be solved satisfactorily until its moral aspects have been considered. The statement that the distribution of wealth in a country should aim at realizing justice or should be so carried on as to give each individual engaged in industry and trade the just or fair remuneration for his services is as much an ethical proposition as an economic one. Many economists have given expression to the idea that the fair price of a productive service is that price which renders possible the maintenance of the producers and their families in a state of health and efficiency. The influence of ethics is quite apparent here. The question as to whether existing institutions, or laws, or customs, are right or wrong is judged partly by a moral standard. Again, questions like what constitutes a 'just price,' 'is it right to sell a thing for more than it is worth,' cannot be answered adequately without the help of ethics. It is clear, therefore, that ethics materially influences the science of Economics in its practical discussions. So close is the relationship between the two sciences that Economics has been described as "the handmaid of Ethics."

Economics and Psychology

Psychology is the science of mind; it investigates the laws of consciousness and deals with the working of the mind. Economics deals with man's efforts to supply wants and satisfy desires concerning his bread and butter. 'Want,' 'desire,' 'effort,' 'satisfaction,' are each and all mental

phenomena and come, therefore, as much within the jurisdiction of psychology as of Economics. The Law of Diminishing Utility, the Law of Substitution, the Laws of Demand and Supply etc., merely explain certain traits of the working of the human mind. The whole discussion of 'Value' depends intimately upon considerations of psychology. The famous remark of Prof. Foxwell that Economics is 'anchored in psychology' well points out how closely Economics is related to psychology.

Economics and Politics

Politics is the science and art of government, it is the science which deals with the organization, regulation, and administration of a state, in both its internal and external affairs. Without a sovereign power a society is almost unthinkable, since men's aims and methods of doing business vary and often lead to conflicts. There are frequent disputes and unfair practices which are settled by the Government. The necessity of Government and its laws are imperative to control economic activities. In recent times owing to the increased participation of the state in the various economic activities of the country, Economics and Politics have come into closer relationship and the Statesman and the Economist have to depend on each other's investigations in order to get nearer to the ideal. Peace and security of life and property are indispensable for the production of wealth, and these are provided in every country by its Government. There are many other ways in which the States influence the field of economic activity. The production and sale of intoxicating drinks is governed by law. The terms of the documents regarding an exchange of goods, of securities and other titles to income or wealth, of credit instruments, etc., cannot be violated. It is the Government which enforces these contracts. Immoral traffic of all kinds is illegal, even if agreed upon by both parties. Workers cannot be engaged on conditions restricting their natural freedom. Trade unions are associations formed under the protection of the law. Many of the problems such as the control of monopolies, trusts, management of railways, public finance, laws regulating banks, factory legislation, etc., have both an economic as well as a political aspect. Countless measures are passed by legislatures to regulate competition. Prop-

duction and distribution of wealth in a country are materially affected by the kind of Government of that place. It is clear, therefore, that Economics and Politics are almost 'wedded' to each other.

Economics and Economic History

Economics is closely related to history. Economic history is a systematic written account of economic events, and is usually connected with a philosophical explanation of their causes. It helps us to interpret the present with a knowledge of the past. Many of the present-day economic problems have their roots in the past and are centuries old. The history of their origin and development greatly assists the economists in throwing light upon those questions after arriving at correct conclusions. It would be an impossibility to study the science of Economics if it is completely divorced from historical studies.

We shall gain a clearer insight into the principles regulating the distribution of wealth in a country, if we follow the process of development through which the system of distribution has passed. The problems of trade unionism can be better appreciated if we study the circumstances under which trade unions originated. The need and function of the Bank can be properly understood only if we take account of its origin. The facts of the Quantity Theory of Money can be illustrated in the light of past events. The effects of machinery on wages, the recurrence of credit cycles, the evils of bad currency regulations, the working of progressive system of taxation, the economic effects of State interference of all kinds are some of the many instances showing the economists' dependence on historical material. Why the taking of interest is justified at the present time and why was it considered immoral and vigorously condemned in the Middle Ages can again be understood well by having recourse to history.

The function of history is not merely to illustrate and confirm the present facts and theories; it also brings mistakes to light. The Iron Law of Wages, the Wages Fund Theory, the Ricardian Theory of Rent, etc., are all condemned to-day by the economic history of wages, rent, etc. It shows the defects of the Malthusian Doctrine of Population and points out how the subsequent course of events

have falsified the fears visualised by Malthus. The study of economic history therefore, plays a very important part in the building up of the science of economics. Sir John Sealey has well said

*'Economics without economic history has no root,
Economic history without Economics has no fruit'*

Economics and Statistics

Statistics is the science of the collection and classification of facts especially those facts which can be stated in numbers or in tables of numbers. There is no branch of human knowledge where the marshalling of figures and observation of mass of facts is not necessary. But for determining the laws of Economics and, as a matter of fact, of all the social sciences, there being little room for experiment, statistical inquiry is the only possible mode of investigation. Malthus based his theory of population upon elaborate statistical inquiries. Ricardo's assumption that best lands are cultivated first was based on statistical data. The statement that labour in modern times tends to move from the ill paid to the better paid localities is based on statistics. The tendency of financial crises to occur at certain intervals was in the beginning disclosed by statistical observations. The problems such as whether during the last so many years the value of gold has appreciated or depreciated, whether the position of the working classes today is better or worse as compared to the last thirty or forty years, whether trade is flourishing now or is depressed etc., are statistical in their very nature. The economic condition of a country cannot be described adequately unless we have the statistics of production, wages, prices, exports and imports, taxation national indebtedness, etc. Statistics, therefore, is of immense service to the economist.

Economics and Physical Sciences

Physical sciences relate to *natural or material things*. Economics uses many of the laws of nature as its own premises. The definitions of 'Production' and 'Consumption' in Economics,—namely, that by Production is meant only the creation of economic utilities and not of matter, and Consumption means the destruction or utilization of

utility alone that is present in the matter and not the destruction of matter itself—are based upon the important truths of chemistry about matter, namely, that matter is irreproducible and indestructible. The important law of Diminishing Returns has been borrowed from the science of Agricultural Chemistry. Man's economic efficiency is affected by physical conditions as well and economists in treating the problem of economic efficiency of the people take note of this fact. It is from the Science of Astronomy and Astrology again that Jevons derived his famous "Sun-spot Theory of Crisis." It is clear, therefore, that Economics borrow a numbers of its data from the physical sciences.

It should be noted clearly that the economist is not concerned with the establishment of the ultimate principles of the various sciences—moral or physical—mentioned above. He does not investigate into the nature of the laws of sciences other than his own. Though the laws of economics rest upon a number of laws of other sciences, he accepts these principles merely as his data and does not establish them as his conclusions.

The Nature of Economic Laws

The term "law" is used in various senses. In its legal sense it is understood as an ordinance of government. Law, in this sense, is a rule of conduct or action which is prescribed by the governing authority and is enforced by a sanction. Such laws enacted by the State are called statutory laws and suitable punishments are prescribed in cases of default or disobedience. Like statutory laws, there are customary, moral or religious laws which enjoin people to do, or not to do, certain actions. Such laws differ considerably from scientific laws.

In its scientific sense law means a statement of relation between cause and effect. In this sense it is a statement of the relation of phenomena which is invariable under the given conditions. Economics being a science, the term "law" in its discussions is naturally used in the latter sense. Economic laws, therefore, are simply statements of relations between cause and effect of economic phenomena.

All the laws of the different sciences are, however, not similar in nature. Laws of the physical or natural sciences are universally true and must always happen without any exceptions or variations. The famous formula H_2O of Chemistry, for instance is of universal applicability. Whenever and wherever under certain conditions of temperature, pressure etc. one atom of oxygen is placed in contact with two of hydrogen, it cannot help making water. Similarly whenever an atom of sodium is mixed with an atom of chlorine, sodium chloride (common salt) is inevitably formed. The law of Gravitation in physics states how bodies attract one another, of which the fall of a body to the ground is an example. The apple cannot refute the law of Gravitation by refusing to fall to the earth.

Economic laws, on the other hand do not possess universal validity. They are true only within a limited sphere. The law of Diminishing Utility which declares that the increasing supplies of an object of consumption becomes less attractive to a consumer is not rigid in its application and has no mathematical boundaries. "It is certainly not an easy matter to tell how many horses would satisfy a sportsman, or how many dresses would lead a fashionable woman to cry 'Enough' or the number of rubies desired by an Indian rajah, or how much money would completely satisfy the wants of a civilized man. The law of Diminishing Returns which declares that the additional doses of capital and labour applied to the cultivation of land produces less than proportionate returns is not invariably true. Its operation is often retarded by a change in the skill of the cultivator, a change in the art of cultivation or by the insufficiency of the earlier doses of capital and labour. The law of Population which states that the population increases in geometrical progression is counteracted by preventive and positive checks. The Ricardian law of Rent does not apply universally in the form in which it is stated. Even the most universal laws of demand and supply may be offset by counteracting forces. A rise in the price of an article need not necessarily result in a lessening of the demand for it if, for instance, the rise in price has been accompanied by the discovery

of new uses of the commodity. If at two different shops in the same neighbourhood an article of a particular kind sells at different prices, naturally people will purchase the commodity in question from the cheaper of the two shopkeepers. From this it is not unnatural to hazard a law that people try to purchase things from the cheapest seller. But even such an obvious law need not necessarily be of universal applicability. Some people might choose to buy dear to attain social distinction, or to discourage sweating, or due to any other extraneous reason. When man melts gold coins to obtain bullion he melts the full-weight coins and not the coins having light-weight. Economic laws, hence, are not immutable laws like the laws of the physical sciences. The laws of the natural sciences are exact and of universal application because they deal with things which have no volition. They deal with things which cannot help taking place and have no choice of their own to exercise. The laws of Economics are inexact because of the very nature of its subject-matter which deals with living and free men who possess volition and who often have their individual whims and caprices. In Economics the conditions are dependent on the variations of human feelings, passion, sentiment, and taste. The great complexity and variety of circumstances which surround every economic problem are such as to render the enunciation of exact and general laws impossible. Prof. Marshall aptly remarks that "the actions of men are so various and uncertain, that the best statement of tendencies that we can make in a science of human conduct, must needs be inexact and faulty."

It is clear, therefore, that the laws of Economics are not, and cannot be, as exact as the laws of the physical sciences and for that reason many economists now prefer to call economic laws, merely as statements of tendencies, and not laws, because they are understood to mean exact and absolute statements. The term "law" in Economics therefore means in the words of Marshall "nothing more than a general proposition or statements of tendencies, more or less certain more or less definite." Economic laws are thus expressions of tendencies merely, and not exact statements of cause and effect. When an economic

proposition is laid down it is not alleged that *every* man *must* behave in a certain way. Economic laws do not say 'all men do this,' but only most men would do so.

Methods of Economics

The procedure of discovering the facts or laws of a subject goes by the name of 'Method'. The methods of Economics, therefore, are the ways employed for investigating and finding out economic laws. Our task here is to find out those processes which are specially followed and are most suited for the investigation of the truths of economic science.

There are two logical methods—the deductive and the inductive—which are generally employed for discovering the truths of different sciences. Deduction is that form of reasoning where some axiom or proposition is taken for granted and conclusions are drawn from this general premise. The conclusion can, therefore, never be more general than the accepted proposition itself. The conclusion, as a matter of fact, is always contained in the major or accepted premise. To illustrate—'All men are mortal,' 'Narayan is a man,' therefore, 'Narayan is mortal.' This form of reasoning is deductive, where we pass from the general to the particular. In deduction as the name signifies, we deduce new conclusions from fundamental assumptions.

Under the inductive form of reasoning general propositions are not taken for granted but are formulated on the strength of the examination and comparison of many individual instances. Under inductive method the points of similarity discovered in the various instances under examination are put forward in the form of a general statement or law. Later these conclusions are further tested with reference to more facts. When a number of corks are thrown in water and when we find that each one of them floats on it we are naturally tempted to form a general proposition, namely, that 'All corks float on water'. This method of arriving at a truth is inductive. Unlike the deductive method here we reason from the general to the particular.

Having noted the various methods that are employed for arriving at truths of different sciences, it now remains

for us to investigate whether the method of Economics is deductive or inductive. There is no consensus of opinion on this apparently simple question. A considerable difference of opinion exists as to the method by which the subject of Economics should be investigated. Some economists are of the opinion that Economics is primarily an abstract science and that its method is essentially deductive. They try to base the whole science of Economics on some fundamental assumptions which they have taken for granted as being part and parcel of human nature. 1. One of the more important assumptions of this school is that all persons engaged in business will, in selling goods or services, try to get as much wealth as they can in return for the goods or services they offer. The critics of this method point out that this assumption is not necessarily true and that men are often induced to render services of diverse kinds by family affection, friendship, compassion, patriotism, and by many other motives. 2. Then there is the assumption of the deductionists that a man prefers a larger price to a smaller for his labour. 3. But for the love of reputation, disagreeableness of the better-paid job, future prospects, opportunities for supplementary earnings, etc., a man often prefers to have a smaller remuneration to a larger one. 4. The assumption that man desires not only to obtain as much wealth as possible but he wants to get it by the least possible amount of labour is equally open to objection. Many persons work assiduously, however, unmindful of the rewards they are expected to receive simply because they derive a sense of happiness out of their work. The method of deduction in Economics, therefore, consists of taking a few premises about man as indisputable, and on the basis of these propositions the science is constructed. And as the data chosen do not necessarily agree with facts, the conclusions arrived at with the help of such data are bound to be defective.

The deductive method, which argues from general principles to particular cases, being dogmatic, dangerous and unsuitable for economic inquiries, the writers of the second school of thought, namely, the inductionists, point out that it is incumbent upon economists to return to reality in order to formulate their principles and theories.

These writers claim great merit for the inductive method because here everything is based upon hard facts and point out that it is the only suitable method for economic science (The inductive method is also known as the historical method on account of its special insistence on the importance of historical material in building up the science of Economics). In the field of Economics this method consists in the observation of social facts as they are revealed to us, and on the basis of these observed facts general propositions are formed. The law of Diminishing Returns, for instance, is the outcome of the inductive method. The comparison of production on a large and on a small scale is based on induction. It is through induction that we know about the causes that encourage accumulation of capital in a country. Malthus formulated his theory of population by pursuing the inductive method of inquiry. Now the deductionists, in their turn, point out that it is delusion to suppose that the inductive method can ever be serviceable in the social sciences for various reasons. Firstly, in the social sciences the observation of facts is very difficult. Secondly, social facts are limitlessly diversified and are usually very complex. And lastly, there is the immense difficulty, if not impossibility, of carrying on experiments in social sciences, because it is very difficult to observe the effect of any single cause coming into operation in the midst of an unchanging environment. The economists cannot easily experiment with human beings. The deductionists point out, therefore, that whatever may be the suitability of induction in other sciences, it is in no way suited to investigating economic laws. If pure deduction is inadequate, pure induction also is equally inadequate.

The difficulty of formulating any general principle by the first or the second method alone led to that combination of induction and deduction which holds the field in economic discussions in recent years. The position taken up by modern economists is in the tone of moderation and in an attitude of compromise. According to these economists the solution of the contest about method does not lie in the selection of deduction or induction, but in the acceptance of deduction *and* induction. In the words of an eminent economist, "induction and deduction

are both needed for scientific thought as the right and left foot are both needed for walking." We have, therefore, to approach the various problems of Economics with both the methods. Which method is most to be used depends on the nature of the particular problems we are investigating. In treating of the production of wealth, for example, the inductive method is pre-eminently employed. In the discussion of the theories of distribution and exchange, on the other hand, the method that is primarily made use of is deduction.

Usefulness of the study of Economics

When a man sets upon any course of inquiry, the object of his investigation may be either theoretical or practical—either the inquiry is conducted for the attainment of pure knowledge or for the sake of good things to which that knowledge leads. Economics is no exception to this general rule and likewise has a two-fold aspect—the theoretical or the light-bearing and the practical or the fruit-bearing. The study of Economics has now come to be regarded very important and useful for a clear understanding of the commercial and industrial problems of the society.

Theoretical importance of Economics

Those who study Economics benefit considerably by a breadth of outlook and a wider conception of man and of matter. Economics teaches us a large number of truths about man in relation to wealth. It is through the study of Economics that we know of the laws and causes that govern the consumption, production, distribution and exchange of wealth. The organization of industry and trade, conditions of the money-market, characteristics of the foreign trade, factors that determine the efficiency of labour, causes affecting density of population, the problem of the determination of price, etc., are some of the innumerable things that we learn as a result of economic study. It tells a business man, an industrialist or a labourer what place he occupies in the economic structure of the country and how he is working very intimately for a common end without being aware of it. Economics, therefore, is worth studying for its own sake as a mental exercise. But few people are satisfied with a science

which merely provides interesting mental gymnastics and serves no material purpose. The teachings of Economics are of great practical use both to the individual and to the society.

Practical importance of Economics

From the study of Economics a student can understand his place and function in the co-operative task of wealth production and it enables him 'to estimate his contribution to the industrial structure, and thereby to deal more intelligently with the daily problems with which he is confronted and also to appreciate more deeply the many difficulties which day by day arise within his own industry, within the boundaries of his own country, and in the world at large'. A consumer will tend to obtain maximum satisfaction out of a given income and thus increase his efficiency. A business man can benefit much by the teachings of Economics inasmuch as he can effect economies by the application of the law of substitution, etc. to his business. To a labourer, it is equally useful because it helps him to appreciate the view point of the capitalist as well as to safeguard his own interests from being exploited. To a statesman or a social reformer, the study of Economics is of great help in deciding to bring about such measures which promote the economic prosperity of the country or in tackling social customs which help or hinder the economic progress of the community.

Economics deals with some of the most important subjects which concern society and its importance is being increasingly recognized under a socialist type of Government. It has greatly affected the legislation of every civilized country. Indeed, the main use of Economics is to assist in the betterment of human life. How an increase in the income of the poorer classes can be brought about and the evils of poverty removed, how employment to the educated classes can be provided and the spectre of unemployment lessened or mitigated, how the burdens of taxation should be distributed among the different classes of society without affecting their productive capacities, how the problem of acute indebtedness among the agriculturists can be tackled, how the evils of fragmentation and scatteredness of holdings can be avoided, how the

✓ accumulation or supply of capital can be increased ; how capital and labour can be made efficient in the joint task of wealth-production; and how better distribution of wealth can be obtained, are some of the many problems that the economist tries to solve.

The various Factory Legislations, Mining Acts, Trade Union Acts, Trade and Industrial Disputes Acts, Workmen's Compensation Acts, Payment of Wages Acts, Unemployment Insurance Schemes, Maternity Benefit Schemes, Co-operative Societies Acts, Debt Acts, Tenancy Legislations, Rural Uplift Schemes, etc.—both in India and outside—are some of the numerous practical achievements by the study of Economics. Prof. Marshall has well remarked that “Economics has then as its purpose firstly to acquire knowledge for its own sake, and secondly to throw light on practical issues.”

India is passing through a transitional stage with all its social and economic structure being in the stage of a new formation since the advent of western ideas. A study of Economics in India will be found very instructive and useful in understanding the principal economic and socio-economic problems faced by the country at the present time, and a study of facts and problems of Indian economic life will reveal to what extent poverty is deep-rooted and unemployment in the middle classes is rampant in the country ; under what backward and unfavourable conditions the premier industry of India, viz., agriculture, which maintains about three-fourths of her population, is carried on by the starving cultivators ; how the laissez-faire policy vigorously pursued by the Indian Government till very lately has hampered the industrial development and led to the progressive ruralisation of the country and the true economic interests were neglected ; and how the material development and steady progress of agricultural and manufacturing industries of the country can be achieved.

CHAPTER II

GOODS AND WEALTH

We have noted before that Economics is that social science which deals with man's activities in relationship to wealth. It remains for us, therefore, to tell what wealth is. Before explaining the term, 'wealth,' let us, however, take another term, 'goods,' the meaning and classification of which should be clearly understood before determining a definition of wealth.

Goods X. H2 13790

The term 'goods' denotes any object of human desire. All those things that satisfy human wants are called goods. Air, sunshine, water, food, clothes, shelter, books, cigarettes, wine, love of parents and friends—each of these is 'goods' because it tends to the satisfaction of human want. The chief feature of goods is that they satisfy our wants, that they are desirable, agreeable, useful, that, in brief, they possess what the economist terms 'utility.' The utility of a commodity is simply its capacity of fulfilling a want or of satisfying a desire.

Goods may be classified in more than one way when viewed from different standpoints. They may be classified as

(1) *Free Goods and Economic Goods*.—Those goods whose capacity to yield utilities is not due to human effort are 'free goods.' Free goods are not man's products, they are not the results of human effort or sacrifice. For example, permanent properties of the soil, inherited personal aptitudes, trees in forests, the fish of the sea, air, sunshine, water, climate, etc., are all free goods because they have been freely handed over by nature to the people without any effort on their part. Free goods are also called 'gratuitous goods' or 'natural goods.' On the other hand, all those desirable things which are the results of human effort are 'economic goods'.

Economic goods include all those things that have required effort or labour to produce. Thus buildings, books, furniture, trees planted by man, wheat, rice, etc., are all economic goods because their capacity to yield utilities is due to human effort. Water also, for instance, becomes an economic goods after it is conveyed by pipes from reservoir for the use of inhabitants in a town because its conveyance has required human effort.

2 (2) *Material Goods and Immaterial or Non-Material or Personal Goods*:—In the words of Prof. Marshall, "Material goods consist of useful material things, and of all rights to hold, or use, or derive benefits from material things, or to receive them at a future time." Land, water, air, climate, mining, fishing, manufactured articles, agricultural products, machinery, implements, buildings, mortgages, shares in companies, patent-rights, copyrights etc., are all included under the head of material goods. Immaterial goods are of two kinds: (i) Internal: Internal immaterial goods consist of man's own qualities and faculties for action and enjoyment. For instance, man's business ability, professional skill, and the capacity of enjoying music and reading are internal immaterial goods inasmuch as these lie within the man himself. And (ii) External: External immaterial goods consist of man's relations, beneficial to him, with other people. A suitable example under this head is that of a good-will of a business.

2 (3) *Internal Goods and External Goods*:—An internal goods is that desirable thing which a man finds within himself and which cannot be separated from him. The capacity of an advocate, the artistic taste of an artist, the skill of the carpenter, the voice of a musician are all internal goods inasmuch as the said capacity, taste, skill, and voice cannot be separated from the possessors of these gifts. External goods consist of all those desirable things that the outer world offers for the satisfaction of man's wants. They do not form part and parcel of man's self. Bread, sunlight, climate, good-will of a business, furniture, etc., belong to the class of external goods.

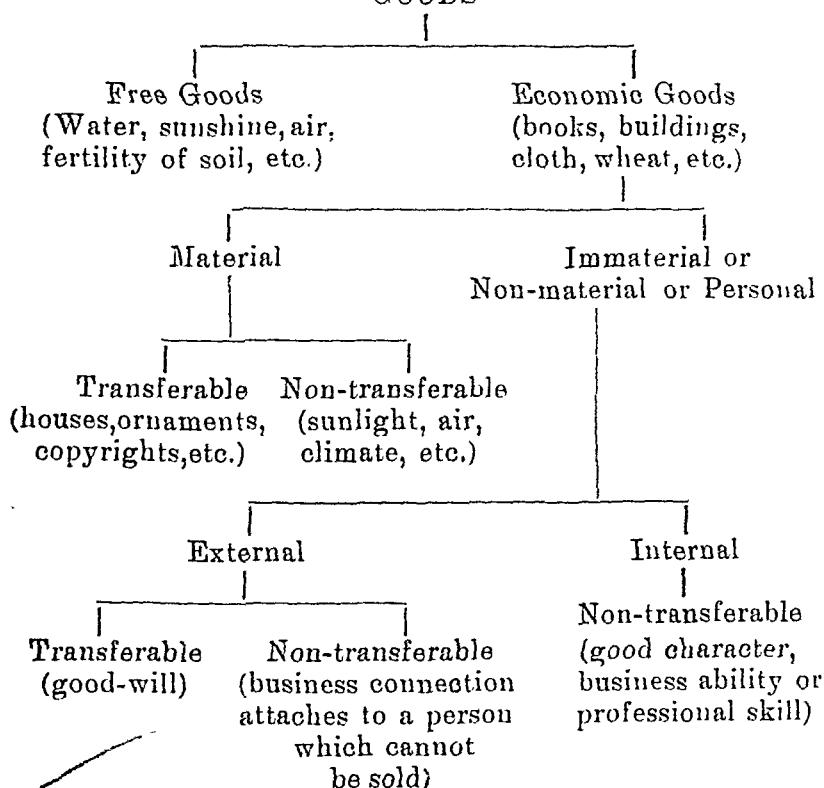
(4) *Transferable Goods and Non-Transferable Goods*:—Transferable goods are those desirable things which can

be bought and sold. If A is in a position to choose whether he shall confer a benefit on X or on Y, such a goods may be called transferable. A transferable thing need not always be a transportable thing, it is simply a thing inherently capable of being bought and sold. Books, pencils, land, agricultural products, buildings, good-will of a business, etc., are all transferable goods because they are capable of being bought and sold. Non-transferable goods are those useful things which are incapable of being bought and sold. Non-transferable goods are either (a) material, e.g., opportunities of using public property or natural gifts such as the advantages of climate, air, sunlight, etc., or, (b) personal such as a person's qualities and faculties for action and enjoyment. The dexterity of a violinist or carpenter or painter, etc., are some of the examples of personal non-transferable goods.

(5) *Consumption Goods and Production Goods* — Those desirable things which satisfy human wants directly are called consumption goods. Food, clothes, houses to live in, etc., are consumption goods because they are used for the direct satisfaction of human wants. Consumption goods are also called 'goods of the first order'. Production goods are those desirable things which satisfy human wants indirectly by contributing towards the production of consumption goods. Raw materials, ploughs, looms, machinery, etc., are all production goods because they assist in the satisfaction of human wants only indirectly. Production goods are also called 'goods of the second order,' or 'instrumental' or 'intermediate' or 'auxiliary goods'. (There is no sharply demarcated lines between consumption and production goods. The same thing can be a consumption goods from one point of view and a production goods from another point of view. Suppose an employer has a stock of clothes and food for his labourers, the clothes and food will be consumption goods for the labourers but they will be production goods from the employer's point of view.)

In order to make the above divisions of goods much clearer to the students, a diagram is given below—

GOODS



✓
Wealth

This is one of those terms in Economics about which there is a considerable difference of opinion and hence the term 'wealth' has been defined in a variety of ways. According to some, anything which satisfies human want is regarded as wealth. (In this sense wealth and goods are the same). Some confine the term to those things which satisfy human wants and are limited in quantity, others understand by the term those things that are produced by man's labour, and yet others say that transferability is an essential attribute of wealth. We are, however, inclined to adopt the definition of wealth as given by Marshall as that seems to be the best and the most reasonable one. Wealth in this sense, includes two classes of goods: (1) all material goods, and (2) all external immaterial goods. Wealth, therefore,

consists of all material goods plus all external immaterial goods. In other words, all goods other than internal immaterial goods are included in wealth. Or to be briefer still, all goods except internal goods are included in wealth. Rivers, mountains, ocean, good climate, roads, museums, food, clothes, houses, etc., are all wealth because they are not internal goods. The skill of the painter, the voice of the musician, business connection attached to a particular person, the capacity of an actor, etc., are not wealth because they are internal goods. Internal goods have not been included in wealth because it is considered desirable not to confound man, on the one side and the wealth to which his activities have reference, on the other side.

Individual's Wealth

An Individual's wealth consists of

(1) All the material goods possessed and owned by the individual to which he has private rights of property, e.g., land, houses, ornaments, clothes, shares in public companies etc. (If the individual has any debts to pay they must be deducted from his total possessions before his wealth can be assessed),

(2) All his external immaterial goods, e.g., the goodwill of his business and the organization of his business, and

(3) An individual's share of the common wealth, i.e., those material goods which he shares in common with his neighbours, e.g., the benefits which an individual derives from living in a certain place, civil and military security, the right and opportunity to make use of public property and instructions of all kinds, right to justice, right to education, etc.

National Wealth

National wealth consists of

(1) The sum of the wealth of all individuals who are members of the nation. (Debts from one member of the nation to another member are to be omitted)

(2) Public material property of all kinds which belong to the nation, but not to any one individual, e.g., parks,

canals, railways, docks and harbours, public buildings, public libraries, roads, etc.

(3) All free goods owned by the nation, e.g., rivers, mountains, climate, natural resources, natural harbours, etc., and

(4) Non-material elements of national wealth, e.g., the organization of a free and well-ordered state.

(The terms 'social wealth,' 'collective wealth,' 'communal wealth' and, 'common wealth' are also used at times to indicate what we have just described as national wealth).

Cosmopolitan or International Wealth

Cosmopolitan wealth is the wealth of the whole human race. It is the wealth of the world as a whole. It consists of :

(1) The wealth of all the nations. (Debts due from one nation to another nation must be omitted), and

(2) Those goods which belong to the world as a whole, e.g., ocean, scientific knowledge, mechanical inventions, etc.

CHAPTER III

THE DEVELOPMENT OF ECONOMIC LIFE

To have a clear insight into our present economic system it is necessary to enter into a consideration of the various economic stages through which society has progressed in arriving at its present development. In considering these stages no note is taken of the pre-historic age because facts, worthy of consideration, are not available for that period. Only regular stages in economic evolution are, therefore, treated. The stages of the history of man's efforts to get a living have been variously classified. These classifications of the course of man's economic development are usually based upon (1) his means of procuring goods, (2) his ways of exchanging goods, (3) from the standpoint of the wage-earning labour, and (4) from the point of view of the development of the economic unit. For our purpose we have adopted the first basis of classification, namely, the one which is based on the increasing power of man over nature because that is the most generally accepted basis of classification of the development of the economic life of man. Starting thus, the course of man's economic development has been divided into five stages as follows —

The Hunting and the Fishing Stage

✓ The primitive man had few and simple wants to satisfy. He did not know to make or produce things and contented himself with whatever was available at hand. (He lived mainly by hunting and fishing and by acquiring the fruits which grew wild about him, and employed the skins of animals and barks of trees for clothing and a cave or cluster of trees as his shelter.) When a man's only source of living is the products of the chase, and when game is not available he willingly has to resort to cannibalism in order to satisfy his most pressing and insistent want of food. War became an economic neces-

sity whenever food was not available and the enemies taken in war were used for eating purposes. The practice of cannibalism was necessitated because of the economic conditions of the time [He had plenty to eat at one time and had to face starvation at another because meat and fish could not be stored for a long time. He should not, therefore, make a provision for the future. He had no fixed abode because he had constantly to move about in search of food. This being his condition of life, the population then was bound to be sparse.]

✓ There was no idea of ownership of land because it was not useful in those days. Private property was confined only to arms of war, such as the spear, the bow and arrow, and some stone implements which were used for killing the prey-animal. [People lived in isolated families, and, hence, the question of exchange of goods, division of labour, trade etc., did not arise.]

The Pastoral or Nomadic Stage

In this period man evinces a little higher type of culture than was possible in the preceding stage. The food supply of the people of the first stage being very insecure because of their utter dependence on nature for it, they attempted to domesticate and breed animals in order to insure a more continuous supply of food even when game was not available. ✓ Animals could also be used for clothing and transport purposes. ✓ When hunting tribes do not depend for food solely upon the killing of animals and take up to the art of taming and breeding them, we have what is known as the pastoral stage.

[Man still does not know how to raise grass and other materials for his flock. On account of this he has constantly to move about from place to place in search of new pastures when old ones are eaten up.) Fixed and settled abodes were, therefore, impossible. Conflicts still took place frequently when different families and tribes came in the way of each other in the attempt at temporary monopolization of pasture land. The victims of war were not used for eating purposes as before, but instead were employed as slaves for tending and looking after the flock of the victor. Thus the practice of cannibalism gives way to the institution of slavery.

- . In the modern sense of the term even in this period there was no ownership of land. Tribes did lay claim to certain areas and tried to keep others from pasturing there but this was done only for a time. As soon as the existing feeding-grounds were exhausted, they relinquished them for new ones. (Private property now consisted of not only some useful weapons but of flocks and slaves as well. With the owing of some private property it was inevitable for the distinction between the rich and the poor to crop up, and that distinction did arise in this period. The property after the death of the headman of the family generally passed on to other members of the household, and this gives us a glimpse in the beginning of the idea of inheritance. As each family was still self-sufficient there was little exchange or commerce)

The Agricultural Stage

This stage evolved somewhere near the tenth and eleventh centuries. The subsequent stages in the progress of time have not wholly displaced this stage but have only modified it. The characteristic features of this stage are present even in the existing industrial stage all the world over and in India about seventy one per cent of the people are still directly dependent upon agriculture. In the attempt to get a continuous and certain supply of food both for himself and his animals man in this stage picks up the knowledge of cultivation and acquires control over the forces of nature. Agriculture was added to the already existing sources of livelihood.

When man took to cultivation, the wandering life had to be given up and fixed abodes developed. A corporate life in the form of villages, etc., was the inevitable result of man's taking to permanent abodes. As a result of people's living in close association the idea of 'neighbour' and 'stranger' came to the front. *Population began to increase fast as it became now possible to feed more mouths.*

With the adoption of agriculture the development of the idea of the private ownership of land was inevitable and people began to prize land. The institution of slavery was further strengthened because labourers were

required in large numbers to help in the tilling of the soil. With the increase in the wealth of the people, the tendency to trade and commerce also increased.

The Handicraft Stage

Man contented himself so far with what nature gave him or what he could raise from the earth. As man became more civilized and his knowledge about natural resources increased, he began the work of making and manufacturing things. Man makes things either directly by the hands assisted by ordinary tools or indirectly with the help of machinery. In this stage man manufactured things directly by his hands. The word 'manufacture' itself meant in those days making things by hand. Handicraft means a trade requiring skill of hand and because in this period hand was chiefly used for the making of things the stage goes by the name of the handicraft stage. This stage lasted, roughly speaking, from the latter part of the Middle Ages to the era of machine production. Though man took up the work of making things, agriculture still continued as the most important single industry of the people even in this stage.

Labour and capital become distinct and important factors of production hereafter. Man began the work of wearing fabrics, making diverse kinds of metal, wooden and earthen articles, and transforming other raw materials. Specialization and division of labour came in with the coming in of manufactures. Different persons adopted different occupations such as the work of blacksmiths, shoemakers, weavers, carpenters, potters, etc. who were called craftsmen and their occupations as crafts. So long as each man was engaged in the same kind of business there was little scope for commerce. But when man began to specialize and each man took to one distinct occupation and made articles of only one kind, it became inevitable for him to exchange his superfluous articles with the excess articles of others which he was in need of and which he himself did not make. Exchange, trade, and commerce all necessarily developed with the development of manufactures. The progress of manufactures is also closely followed by the development of that class of dealers known as middlemen. On account of the

difficulties and the inconveniences of the barter system, it had to give way to the money economy system

Some of the villages which had become important manufacturing centres began to develop into towns. Different trades had their separate guilds to organize them in the absence of any sound national policy and protect the interests of the craftsmen. These guilds prescribed the way in which the business was to be carried on, the number of persons to be admitted to them, and the manner in which the trade could be learned. The right to trade within the town and in the surrounding country was reserved for the townsmen. The institution of serfdom takes the place of slavery in this stage. The products of the artisans of other towns could be admitted into the town market only under severe restrictions. Those goods which could not be produced in the town could be introduced from other towns but as a rule nothing which could be produced in the town was to be imported from outside. There were no proper facilities for transportation in this stage. Bullocks and pack horses were the most common means of transporting goods.

The Industrial Stage

When man begins making things indirectly through the help of machinery and works with other than man's power, we enter upon what is known as the industrial stage. This is the era of power manufacture as opposed to hand manufacture which was the characteristic feature of the handicraft stage. This is the stage in which we are living.

This stage dates from the year 1760. With the invention of James Watt's steam engine, Kay's shuttle, Hargreave's spinning jenny, Crompton's mule, Cartwright's power loom, and Eli Whitney's cotton gin, etc., there took place a rapid transformation of the handicraft stage into that of the industrial stage. As it was impossible for every workman to own costly machinery, the result of all these inventions was to give birth to the factory system of production. Only wealthy persons could now equip their workshops with these high priced machines. The introduction of factory system brought,

in its turn, the question of employer and employed. Large-scale production and division of labour are the indispensable adjuncts of machine production and they are taken advantage of in considerable measure hereafter. When the division of labour is practised in making articles, the problem arises as to what should be paid to all those who contributed towards the making of that article. Formerly a worker had all that he could get after selling an article. This is not, however, possible now because one man does not make the whole thing. Thus has sprung up the modern 'wages system' of employing labour under which the worker gets a contracted wage and the consequent gulf created between capitalists and labourers, the latter always complaining about their inequitable share in the created wealth and resorting to strikes, etc., for redressing their grievances. In the handicraft stage the industry was regulated by custom or law and no competition of any kind was tolerated. But in this stage competition works with a vengeance. Industrialists now compete not for the market of the town but for the whole country and even of the world. On account of competition among producers the cost of production of an article and its price has materially gone down. Machines in this period are employed not only in manufacturing operations alone but also in agriculture. Modern, up-to-date, and scientific cultivation is impossible without the aid of machinery and power other than that of man.

Though money has developed in the handicraft stage, the system of credit develops primarily in this stage. The institutions of credit such as banks, and the various instruments of credit such as 'hundies,' cheques, drafts, etc., have all their origin mostly in this period. Before this stage the problem of moving things from place to place was not at all important. In this stage, because this problem became a practical one a great advance has taken place in the development of the means of communication and transport. Changes in the methods of industry and transport have also encouraged the growth of big and small cities.

These stages are, however, not sharply separated from each other. No definite date can be assigned when

man gave up one method of obtaining goods and adopted another. The change from one period to the other took place very slowly. Besides, all the features of the earlier stage do not necessarily die out when man enters in the new stage. Moreover, no dogmatic statement can be made about the order in which one period is necessarily followed by another period of economic development, i.e., in some places some intervening stage may not have occurred. In the present stage itself example can be found characterizing all the different stages mentioned above. Thus a higher stage does not necessarily supplant the lower one in toto, very often it merely adds to it certain features which did not exist before.

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CHAPTER I

Consumption

MAN'S WANTS AND THEIR SATISFACTION

What is Consumption ?

Man is a bundle of infinite variety of wants ranging from the most elementary needs to the most sumptuary satisfactions that we see all around us or feel in our everyday life. Consumption deals with man's wants and their satisfaction by the use of wealth. The direct satisfaction of human wants by the enjoyment of the utilities in goods is called consumption. By satisfaction we understand the derivation of pleasure or the diminution of pain on the acquisition of that commodity for which a particular want makes its presence felt. In popular language the word 'consumption' means destruction ; for instance, when we speak of fire as having consumed wood. But in Economics the consumption of wealth does not mean destruction of wealth ; it denotes the use of wealth in such a manner as to give satisfaction to the user. Just as production means creation or increase of utility in the matter already in existence so consumption means nothing more than a dis-arrangement of matter which may result in diminution or extinction of utilities. As a matter of fact, matter is indestructible ; the world loses not a whit by the act of consumption, but some of it is rearranged so that it is no longer capable of satisfying a particular want. We consume candles for light purposes but the matter is not lost for a chemical analysis would show that the candle has disappeared in the form of water and carbondioxide gas. Consumption is distinguished from destruction inasmuch as the latter makes wealth incapable of satisfying human wants. If a house is accidentally burnt down and reduced to ashes it is destroyed not consumed because the utility which it would have given to the owner for a much longer period of time comes to an abrupt end.

Those goods the utility of which is consumed in a single operation are termed as perishable goods such as coal which gives us warmth only once. But those goods which give repeated satisfaction to human wants for a considerable period of time and are "destroyed by those numerous gradual agents which we call collectively time," are known as durable goods. The clothes which wear out slowly and gradually, the cosy chair which yields its utility to the owner for a considerable time, the book which produces intellectual enjoyment, gold ornaments and diamonds which satisfy the wants of many successive generations of owners—these and many others are examples of durable goods. In both cases, utilities embodied in goods are consumed. The act of consumption applies to services also, e.g., if a lawyer engages a typist on Rs 40 per month, he is consuming the services of the typist on Rs 40 a month. Consumption, therefore, "connotes the yielding of satisfaction in the sense of meeting a human want, and the fact that satisfaction is yielded once and for all or over a long period of time is not of great importance. What is important is the fact that a desire has made itself felt and human effort has been directed to its satisfaction"

Productive and final Consumption --A distinction is often made between 'productive consumption' and 'final consumption'. By productive consumption we mean the utilization of an article not for direct consumption but for the creation of new and greater utilities. Thus, when coal instead of being used for heating a room is burnt in the boilers of a factory to run the machines, it is consumed productively. Final consumption means simply that in which the article is used not for any further production but to bring about the direct satisfaction of wants. The utilization of machines in a woollen factory is an example of productive consumption, whilst the use of shawls manufactured by those machines is an act of final consumption.

Importance of Consumption

Ricardo and Mill—the two famous economists of the classical school—attached a great importance to the production of wealth and ignored the side of consumption

considering it to be an individual's business which consequently needed very little discussion at their hands. They forgot that consumption is the motive force behind all human productive efforts and that satisfaction arising from the consumption of wealth is the sole aim of all economic activities, and they could not foresee the intimate relationship which exists between the welfare and the nature of consumption followed by the members of a community. The importance of consumption is now recognized by all economists who regard 'wants and their satisfaction' as the foundation of economic life, and study consumer's point of view as searchingly as that of the producer's. Man produces things in order to consume and does not consume in order to produce. The beginning of all economic activities that we observe and experience in our daily life can be traced to the feelings of want or desire. Had there been no wants, the agriculturists would not have suffered the scorching heat of the sun or the bitter cold of the winter season, the labourers would have ceased tending the dangerous and whirling machinery, the traders would have abstained from their perilous journeys and hazardous speculations, the inventors would have reposed peaceably in their cosy abodes and not toiled week in and week out in their laboratories, and in fact there would have been no sign of economic activity. We see people going hither and thither performing their laborious tasks, because they have some wants which need to be satisfied. Satisfaction can be obtained through wealth and wealth requires effort hence human wants furnish the initial motive of all productive efforts.

Consumption is, in fact, both the beginning and end of all our economic activities

Moreover, the importance of the consumption of wealth 'is emphasised by the consideration that as many and as dire calamities have overtaken people, because of their irrational habits of consumption as because of inefficient systems of production, exchange or distribution.' As such the whole problem of consumption has been looked upon as one of primary importance—possibly more important than all these combined. The prosperity of a nation depends not only on the increase of National Income but also on the way in which it is expended and

consumed Nations which resort to productive consumption for exploiting their natural resources after eliminating every sort of waste and regulating their consumption in the most economic way have become prosperous and reached a high pitch of human welfare and happiness, whereas those which indulge in irrational or extravagant expenditure and do not know how to eliminate waste have lagged far behind in the march of progress In view of the above facts State regulations have been framed out to check the consumption of obnoxious or pernicious commodities which tend to retard the progress of a nation It is for this reason that people have begun discriminating between the more useful and less useful consumption The social progress is also judged by the number, variety and quality of wants, as the society makes progress the wants of the people become more subtle and numerous

Relation of Wants and Activities

In the study of Economics we are chiefly concerned with those activities of man which deal with wealth, all the activities undertaken in return for some remuneration are called economic activities But want is the root of all economic activities, it is want that gives rise to production In Economics, a want means a desire for a thing which is backed by some means to satisfy it No sooner a want is felt by man than he makes the necessary effort and satisfies his want Consumption, therefore, is the goal of all economic activity, whereas production is the means to that end

In the early stages of mankind the savage does not exert himself unless he is compelled to do so by his physiological needs To satisfy his primary wants such as for food and thirst either he, like the brute animal hunts wild animals and birds or plucks wild fruits and goes after and after at the search of water or in the later stages when he is somewhat advanced, harvests crops by tilling the soil and digs wells for the supply of water Again impelled by the necessity of getting protection against the stormy rains, bitter cold, or sweltering heat he either provides himself with the bark of trees, digs underground a cell or builds a hut Thus, in the

earlier stages of economic development it is the want that gives rise to activities and all his efforts are directed to the satisfaction of his elementary wants. .

But as man rises high in the scales of civilization and culture his wants increase rapidly in number and variety. He is no longer satisfied with the coarse food he gets but he wants his meals to be more daintily and fastidiously served and he begins to take pride in using embellished metal dishes and vessels instead of the earthen vessels which at first sufficed him. In the progressive human society after satisfying his elementary wants, the desire for distinction and efficiency induces him to undertake new activities with a genuine pleasure. The desire for excellence or for the exercise of one's faculties has been described by Marshall as the chief cause of the multiplication of wants.

From the very beginning of the history of mankind wants and activities react upon one another. At first physiological wants such as hunger and thirst make their presence felt but later on these activities—undertaken for the satisfaction of primary wants—give rise to new wants. For instance, thirst is a physiological necessity. Water must be sought for by sinking wells and the drawing of water from the wells gives rise to new wants such as rope and bucket. Similarly, for the protection of our body we need clothes. This single want gives rise to innumerable new wants and new creative activities too difficult and lengthy to be dwelt upon such as for the cultivation of cotton a whole array of wooden and iron implements is required, for transporting it to the place of manufacture steamships and railways are needed, for converting it into fabrics huge factories of too intricate a nature are required and so on without any conceivable limit. Man's wants are immeasurable and expand without any limit. His circle of wants grows bigger and bigger like a circle in the stagnant waters caused by the throwing of a pebble till it becomes quite imperceptible.

Human wants are determined to a very large extent by physical environments, habits and customs and the social progress achieved by the members of a community.

By way of summing up, we may say that in the early

stages of economic development it is wants that give rise to activities but in the later stages it is the activity that gives rise to new wants leading to economic progress

Characteristics of Human Wants

The wants of human beings are unlimited in number and varied in their character depending to a great extent upon our habits, customs and ideals. They vary in a remarkable degree from country to country, from class to class, and from time to time within the same country or class they vary according to the differences in social and moral standards or economic and political institutions. Economic civilization, it is emphasised, consists in the immense variety and infinite multiplication of human wants. In the midst of all these diversities of human wants, we can notice some uniform characteristics which are almost of universal applicability and upon which are based some of the important economic laws, which we shall study by and by.

(1) *Human wants are unlimited in number* The savage indeed has not many more wants than the brute animal, but as he rises in the scale of civilization his wants increase in number and variety. No sooner a man satisfies his one want than he experiences a desire for another. Human nature is such that new wants make themselves felt as existing wants are satisfied and constantly grow in quality and variety as well. As an example how wants grow in variety, Moreland's description may be quoted. He writes 'A hungry man can be satisfied for the time by a meal of the coarsest food perhaps a little millet and pulse, but when a man is sure of getting such food he begins to want better food and a greater variety,—he wants wheat flour instead of millet, and he wants ghee, and vegetables, and rice, and perhaps fish, and he wants all sorts of spices and flavours. Then he wants the food better served, and he wants metal dishes and vessels instead of the earthen vessels which at first sufficed him. The young pleader may be only too glad to be able to go to court on an *alla* or in a tram car, but as he gets richer he wants first a trap and horse of his own, then a carriage and pair, and then perhaps a motor car."

sion This factor is of great importance in the determination of wages for the different grades of working classes. 'There was a time when workmen wore neither shirts nor shoes, when they had neither coffee nor tobacco, when they ate neither meat nor white bread, but today these wants are so deep rooted, and form so fundamental a part of our nature, that a workman, if he were deprived of them would perish' At the same time it should not be supposed that wants once acquired are perpetual They do disappear but only when they are supplanted by others that are more strongly felt or whose satisfaction yields greater enjoyment

(6) *The utility of present goods is always more than the utility of future goods* People, as consumers, attach greater importance to the satisfaction of present wants than future ones for future satisfaction is always uncertain and problematical The proverb 'a bird in hand is worth two in the bush' clearly exemplifies this characteristic of human wants Obviously the utility of future goods is less than the utility of present goods owing to future contingencies and the inconveniences incurred by the saver On this characteristic of human wants some economists have tried to justify interest-taking

(7) *Wants increase with the advancement of knowledge* It has been already shown that as people make progress in social, economic and industrial spheres and as their knowledge increases through education and facilities provided by cheap and varied means of transport and communication, human wants grow in number and variety and fresh means are sought for satisfying such wants It is for this reason that new wants arise more quickly and rapidly in cities whilst in villages, away from the centres of progress and modernity, new wants develop very slowly

Some Apparent Exceptions

Moreland has pointed out the following exceptions regarding the characteristics of human wants At the outset it must be said that these exceptional wants are outside the purview of an economist, because he deals mainly with the material wants of ordinary men in the ordinary business of life

(1) There are cases where particular wants do not seem to be capable of satisfaction so that the more a man has of a particular thing, the more of it he wants. For example, the love of display manifested in costly and magnificent buildings, clothes, jewels, horses and carriages, cars and in other ways of living, increases with every fresh supply, never reaching the point of satisfaction. But as Moreland points out "this exception is apparent only, because the love of display is not exactly a simple want such as the want of food or clothing; it is made up of a very large number of simple wants, and as each of these is satisfied new wants appear. The case is, therefore, an illustration of the principle that new wants are constantly arising, rather than an exception to the rule that wants can be satisfied completely."

(2) Another exception is the craze or love for power. The craze for some men for power over other people grows more and more with every increase of it. The economist ignores such wants as he is concerned with the wants of ordinary men.

(3) The appetite of a miser for accumulating material wealth, usually in the form of gold, or silver, or precious stones grows keener and keener with every addition of it. He wants wealth simply for the sake of wealth. He neither spends it for his own consumption, nor utilises it in some other way but he wants more, the more he gets. But we exclude from our study the wants of such misers.

(4) On the contrary there are men whose wants do not seem to increase in number and variety e.g., the religious ascetic. Every Indian student must be in the knowledge of the fact that in our own country many wealthy persons after forsaking their worldly riches and enjoyments devote their time in godly contemplation with a loin-cloth on their body and become dependent for their frugal food upon the charities. They are at all times thirsty for the attainment of *Nirvana*. This single want becomes so acute and pressing that almost all other wants become unimportant in comparison. But as this spiritual craving cannot be satisfied by wealth, so it is outside the economist's province.

(5) Instances are not wanting where a particular want

is felt so strongly that the ordinary economic wants give way to it. There are men such as authors, painters or sculptors who being actuated by the desire of self expression produce beautiful work (for the satisfaction of their inward craving) unmindful of the wealth or fame which their works will bring to them.

Different Kinds of Wants

Satisfaction of our wants is obtained through wealth which is got by our productive efforts. The wants of man are numerous and some of them will always have to go unsatisfied though each individual want is capable of being fully satisfied. The question naturally arises: can any rules be laid down as to the order in which people in general attempt to satisfy their wants? All wants are not of equal intensity. Some wants are most urgent, others more attractive, while the rest may be characterised by durability.

Urgency —Our physiological wants, i.e., the wants of food, thirst, clothing and shelter are the most urgent wants which cannot stand postponement. 'Everything that a man hath will be given for his life'. After satisfying these wants he spends the rest of his income in meeting other less urgent wants.

Attractiveness —Some wants are more attractive than others. Individual tastes and habits, personal likes and dislikes, the nature of training one has received are great factors in determining the attractiveness of a want. "Some persons would pay more for a thing that was fashionable, for a colour they preferred, for a piece of furniture or china that was old and rare, in other words for the thing they really liked or admired even though to do so they would have to buy less of other things and to go without something the absence of which would involve more or less of real sacrifice."

Durability —Time is the distinguishing factor. In some forms of consumption the satisfaction is temporary, while in others it is more durable spreading over a longer period of time. For example, the satisfaction derived from the consumption of food or drink is only temporary for the want recurs again within a short period with equal intensity, while that derived from houses of furni-

ture, from clothes or jewellery is continuous and the want once satisfied recurs only at more or less considerable intervals. Some people prefer to spend more on durable goods than attractive goods.

Adam Smith regarded expenditure on durable goods as being an important factor in increasing *national* as well as personal wealth.

Classification of Wants

From the above, it must have been clear that there are some wants which must be satisfied first by man before he can think of providing for others. It is from this point of view that human wants have been classified into three main classes :

(I) Necessaries, (II) Comforts and (III) Luxuries.

(1) Under necessities we generally include those wants the satisfaction of which is too essential for our sustenance and the deprivation of which produces in us a feeling of *pain*. But among the wants which must be satisfied, there are some which must be attended to *avoid death* and others to *avoid loss of efficiency* and some to *maintain the social prestige* in the community in which one moves about. Necessaries, therefore, may again be subdivided into three distinct classes : (a) Necessaries for existence ; (b) Necessaries for efficiency and (c) Conventional necessities.

(a) 'Necessaries for existence' or absolute necessities of life include those articles such as a minimum supply of food, drink, clothing etc., which are absolutely necessary for the continuance of human life. The goods necessary for existence vary in different countries according to the climatic conditions of those regions and are relative to time. "In cold countries the term includes, in addition to sufficient food and drink, a certain amount of clothing and also some sort of a house for shelter ; in the plains of India the necessary amount of clothing and shelter is very small, and perhaps a blanket for the winter is all that a man absolutely requires, so that here the term necessities for existence means very little more than the small amount of grain and water that is sufficient to keep people alive."

(b) 'Necessaries for efficiency' include over and above the necessities for existence all those things which are necessary for keeping a worker *in full efficiency* at his work. Those things which promote the physical, mental and technical qualities of a man leading to a complete and full enjoyment of life are included under 'necessaries for efficiency'. Marshall says 'the income of any class in the ranks of industry is below its *necessary* level, when any increase in their income would in the course of time produce a more than proportionate increase in their efficiency'. According to Moreland, the term *necessaries for efficiency*, would include first considerably more food than is necessary for existence secondly, a certain amount of clothing and furniture, and a healthy house for shelter, thirdly, opportunities for medical treatment, and for education for a man's children carried up to the stage which he himself has received.

(c) 'Conventional necessities' include those articles such as alcohol, tobacco, tea fashionable wares of dress, etc., which do not in any way promote efficiency but which are yet necessary because their consumption has either become habitual or is required by the customs of the society. For a smoker, tobacco is a conventional necessity. If you snatch away from the smoker his puffs of smoke, he shall undoubtedly feel for a time lethargic and disinclined to do any work. Again, many middle-class gentlemen in our cities prefer to use cheap Japanese crepe soled shoes instead of country made shoes in spite of the great inconvenience felt by the users in hot and cold seasons when their feet either get scorched or benumbed respectively, but they are, in a conventional way, forced to do so for the wearing of the latter type of shoes is now beginning to be looked down as a sign of rusticity. For the attainment of conventional necessities many persons not only sacrifice their necessities for efficiency but are sometimes forced to desist from the consumption of absolute necessities of life as a result of the pressure wielded by the customs and traditions of the society. Man being a social creature must concede to these conventional necessities, and if he were deprived of these his efficiency would suffer. Hence, necessities for efficiency include necessities for existence as well as conventional necessities.

The expenditure on conventional necessities incurred in India is comparatively more because of deep-rooted customs found in the Indian Society. "Many people in order to avoid looking low in the public eye economize their earnings after stinting even their absolute necessities of life only to spend them in some marriage or funeral, religious or social ceremonies forced upon its members by the customs of the society."

(II) *Comforts* :—(Those articles the consumption of which does not lead to an addition of efficiency in proportion to the cost incurred in their satisfaction but a deprivation of which tends to undermine the efficiency of a consumer, are termed as comforts.) For example, a worker accustomed to enjoy his night in some cinema "shows" or theatrical entertainments if suddenly deprived of that pastime would take himself to be a bankrupt regarding that satisfaction and his efficiency would tend to deteriorate to that extent. Comforts imply a decent standard of living, and include better food, clothes and housing with some provision for recreation and amusement and for the satisfaction of intellectual needs. Their attainment and satisfaction for the progress of a country has been spoken of by some economists as too necessary. The use of 'Flex' footwear for indigenous shoes, the silk shirts for cotton, cigarettes for the *hukka*, are examples of comfortable consumption.

(III) *Luxuries* :—Luxuries may be described as un-necessaries. (Luxuries include those things which only add to our enjoyments but do not increase our efficiency) Practically speaking, there is no real difference between comforts and luxuries excepting that the idea of luxuries conveys an idea of blame which is not conveyed by comforts, and the expenditure made on luxuries is taken to be as uneconomic or misdirected consumption. Luxuries signify a more elaborate way of living and include showy and costly things such as costly motor-cars, ornaments, table delicacies etc., together with the indulgence in expensive tastes in art, literature and travel. Gide defines luxury as the satisfaction of a superfluous want; Ely regards it as excessive consumption, that is to say, consumption of things which are not necessities.

Having thus classified human wants into three main divisions viz., Necessaries, Comforts and Luxuries, we now come to the real crux of the problem. From the classification into the above categories, it should not be understood that it is based on anything like a fixed standard so that if a certain commodity or service were once assigned to any one of these categories, it would remain so for all persons at all times. For example, it is often supposed that wheat is a necessary thing motor-car a comfort, and scents a luxury. But this is incorrect. The terms vary enormously in significance with different countries, and even in the same country with reference to different social classes, different positions in life, different individuals and different periods of time. What is luxury to one particular class of people may be necessary to another class of people. Our idea of necessities, comforts and luxuries is always relative to persons, time and place. To the busy doctor a motor car may be necessary inasmuch as his efficiency may increase with the car as he is able to attend a large number of patients by having an economy in time, whilst to a wealthy man who keeps it simply for pleasure drives it may be pure luxury. Thus it should be noted that the *classification does not apply to the articles of consumption but it is always in reference to the particular consumer*.

With the change of time and, therefore, of circumstances, there may be a change in the classification of the articles of consumption. Some years ago the use of hat was supposed to be a luxury, now it is beginning to be felt as a comfort, and the time is not far when it might be regarded as a necessity. Similarly, a change in the place may bring about a change in the classification. A shirt is necessary for an English labourer in England, but it is taken to be a luxury for an Indian labourer. 'In some countries the women go bareheaded and the children barefooted. For them certainly hats, shoes and stockings would not be regarded as necessities but they would for the most part be so considered in England today.' Thus the classification varies in relation to different places.

Then, again, the units of the same article are to be taken separately for the purpose of this classification. The whole quantity of the same article consumed by an

individual need not, and, in most cases, would not come under the same category. Thus, one pair of shoes for an ordinary individual would be necessary, another pair comfort, and a third one luxury for the last one would hardly bring about any real change in his comfortable mode of life except signifying an indulgence in expensive tastes. Thus the *classification does not primarily refer to the articles of consumption, but to their units, and varies according to the individual consumer, the time, and the place.*

The question arises if this classification is so variable, can there be any common measure which can be applied in classifying human consumption in general? Economists have found out the common *principle of efficiency*, by means of which an article or the different units of an article can be assigned to each of the three divisions. If the test of productive efficiency be kept in view, we shall have no difficulty in classifying the different units of articles into necessities, comforts and luxuries. By it we can know to what extent the consumption of a particular unit of article generates, in the consumer, conditions of superior productive efficiency. Again, it can also be found out, whether or not, the deprivation of that article decreases his efficiency as a producer. Thus at a given time and place, if the consumption of a certain unit of an article increases the productive efficiency of the consumer, and the deprivation of which decreases his efficiency, then that unit of article would be classified under, 'necessaries.' Again, if its consumption shows a slight increase in his efficiency and its deprivation leads to some decrease in efficiency, then it would be placed in the category of 'comforts.' An article will be a 'luxury' if its consumption and deprivation do not increase or decrease his efficiency.

The foregoing classification of wants in order to bring out its salient features may be tabulated as follows :—

Items	The unit of consumption leads to	Deprivation of the unit leads to
Necessaries	Considerable increase in efficiency	Considerable decrease in efficiency
Comforts	A slight increase in efficiency	Some decrease in efficiency
Luxuries	No increase in efficiency	No decrease in efficiency whatsoever

Classification of wants

A word or two may also be added regarding the order in which people satisfy their wants. To regard that surplus income is spent on comforts and luxuries after expending on necessities is an erroneous idea. It is impossible to dogmatize in this connection. We can only assert that all people try to buy their necessities for existence first. But beyond that minimum there can be no generalization. It is primarily a matter of personal habits of individual tastes and desires. Some are thrifty, others are extravagant. Some will spend more on necessities, others on comforts and a few others will probably like to spend more on luxuries. Again, some will stint of the necessities for existence only to indulge in extravagant expenditure in other directions, e.g., an inveterate drunkard will prefer to forgo his food than to have abstained from his drink. 'Order of consumption is not a matter of rule or regulation, it is a matter of personal habit, of individual tastes and desires' (Penson).

The Standard of Living

The standard of living means the amount of necessities, comforts and luxuries which one person or class is habituated to consume for a long period and for the procurement of those articles, which have come to be regarded as the normal requirements of everyday life, he possesses the

means or the willingness to undergo a reasonable sacrifice. A low standard of living implies the satisfaction of very few wants besides the necessities of life. On the contrary, a high standard of living signifies a greater expenditure on comforts and luxuries, over and above the necessities of life. But readers should carefully note that the most expensive standard is not necessarily the best standard of living and the satisfaction of a large and varied number of wants irrespective of the effects which they produce does not constitute the rational standard. Besides the amount of income, the method in which it is spent also counts much in determining a higher or lower standard of living. A wisely selected and balanced method of consumption with a lower income is preferable than an unthoughtful and extravagant expenditure on superfluous wants with a higher income. We should follow Dr. Marshall who lays down: "Let us take the term the standard of life to mean the standard of activities and wants. Thus an increase in the standard of life implies an increase of intelligence, energy and self-respect; leading to more care and judgment in expenditure and an avoidance of food and drink that gratify the appetite, but affect no strength, and of ways of living that are unwholesome physically and morally." Economists advocate that standard of living which results in the greatest benefit to society and is conducive to the full development of economic, moral and physical side of the persons who have adopted it.

Although there is some vagueness in the connotation of the term 'standard of living,' yet, it is certain that different people have different standards of life. It is purely a personal affair and every individual clearly understands the standard he adopts; it varies from individual to individual, from class to class and from one period to another for the same people. Everyone eagerly looks for opportunities to raise his standard of living by having a command over those articles and services which were previously beyond his reach, and fears for any lowering of the standard for it not only deprives him of the articles and services he was accustomed to enjoy previously but also brings about a 'descent in the social scale with possibly some loss of personal dignity and self-respect.' The

his physical and moral welfare. The effect of inadequate consumption on production is immense. Ill-fed, ill-clad, ill-lodged, the mass of the people of India lead a dull and dreary existence. The want of proper sustenance impairs the vigour and vitality of the people who fall easy victims to the attacks of various kinds of disease. Having no reserve to fall back upon in difficult times, they suffer untold misery whenever there is a slight disturbing cause such as a drought or a failure of the crops. The children of the weak and unhealthy parents become weaklings, and, being themselves ill-fed and ill-bred, swell the numbers of the worthless members of society. Thus the physical deterioration of the people goes on increasing from generation to generation; and with the progress of physical degeneration, their moral stamina also tends to grow less and less strong. Consequently, the efficiency of labour as a factor in production has a progressively rapid tendency to diminish."

Causes of a low standard of living in India and their removal—Besides the poverty of the Indian people, the religious teachings, the social institutions like the caste-system and the joint-family system, the widespread illiteracy of the masses absence of good means of transport and communications are some of the important causes responsible for a low standard of living in India. The income per head in India is ridiculously small compared to other advanced countries like the United States of America, the United Kingdom, Germany, France, Italy, Japan, Australia, etc. By remedying the above causes and impressing upon the people the necessity and value of a better and refined life, an improvement can be effected within a reasonable period of time. As a result of the spread of education and other facilities available in cities, the standard of living particularly of the rich and upper middle classes is showing a tendency towards improvement but that of a vast section of Indian population in villages still shows no signs of improvement. In fact in recent times the consumption of such necessities for existence as supply of food has much deteriorated in quality and quantity and to that extent, it can be said, the standard of living has fallen to a low level.

It is admitted on all hands that the production in

India can be greatly increased by increasing the consumption of the ill-fed people. Increased consumption means only that consumption of wealth which gives the greatest benefit and most rational enjoyment to the individuals and society as a whole. Increased consumption by the lower and middle classes of population of cheap imported articles of luxury and convenience is not an indication of progress and prosperity, as is erroneously supposed by some, if it is done at the expense of necessities for existence. Luxury is economically unproductive and stinting of necessities is always harmful. If the consumption of alcohol, opium, cigarettes, umbrellas and trinkets is made at the expense of milk, ghee, hukka and blankets, it will not lead to any economic progress of the country. People must have necessities for efficiency before they are economically qualified to indulge in these less urgent and superfluous wants.

CHAPTER V

UTILITY

The Definition of Utility

The term utility, in Economics, is used in a different sense than that ordinarily understood by a layman. Utility may be defined as the quality or power of a commodity to satisfy some human want. When we use a certain commodity and derive satisfaction in the course of its consumption, then that commodity is said to possess utility. Anything that possesses utility is classed under the category of goods in our economic science. We want the consumption or acquisition of bread and butter, milk and water, clothings and furniture, wine and opium, conveyances and houses, articles of decoration, display and recreation because they seem to possess utility and the power of satisfying our wants. If a thing is capable of satisfying a desire, it possesses utility irrespective of the effects its consumption brings upon the health and efficiency of the consumer. Although alcoholic liquors and opium are positively detrimental as the constancy of their use brings deteriorating effects upon the health of the drunkard and the opium-eater, in the strict economic sense of the term they possess utility so long as they are demanded and consumed by the respective consumer. Hence the term utility is not necessarily synonymous with 'usefulness' in a moral or social sense. Seager has aptly emphasized the point in question thus: "Anything that satisfies a want and has utility is a good, whether it be the whisky of the trader or the hymn book of the missionary."

Here we must not lose sight of the subjective aspect of utility. It is a psychological evaluation of the want-satisfying capacity of a particular thing. Utility is not an inherent quality of a thing ; it is a subjective phenomenon resting in human want and relative to the intensity of the want. Utility arises only with want and vanishes

with the disappearance of the want. It exists only in relation to human desire and can have no independent and separate existence. The utility of a commodity varies with different persons and at different times and places with the same consumer under altered circumstances.

Utility varies directly with the intensity of a want. Utility or satisfaction secured from the consumption of a commodity is incapable of any physical measurement because of its variability from individual to individual, from place to place and from time to time with the same individual. But we know that the more intensely a thing is desired by a man greater would be his sacrifices for its acquisition. Hence the utility of a thing is measured indirectly by the sacrifice one makes, or the amount of money one is willing to pay in order to get possession of it.

The Law of Diminishing Utility.

There is an endless variety of human wants; they tend to increase with the progress of civilization and growth of inventions. But amidst the confusing varieties of wants experienced by us if we single out any particular want we find that it is capable of being completely satisfied for the time being. However intense desire may be for a particular commodity, its desirability diminishes as its units increase with the consumer at any given time. I may have a very pressing desire to possess a blanket for purposes of protection from cold, but the moment I provide myself with one blanket I may think that I am satisfied for the moment and want no more. I may be suffering from a tormenting hunger, but after I have taken two or three loaves of bread my eagerness for the successive units will decrease and the utility derived thereof will tend to decline. You may consider the desire for the first pair of shoes as intensely high; you may welcome the second pair of shoes though it will satisfy a less intense want, the third pair of shoes will be less eagerly sought until you would no longer feel the need of any additional pair of shoes. We all know about the apparently insatiable desire of King Midas for gold and when he eventually got enormous quantities of it he began to hate the sight of it—an object of desire and admiration became one of dissatisfaction and disgust. These illustrations serve to show that man's wants though

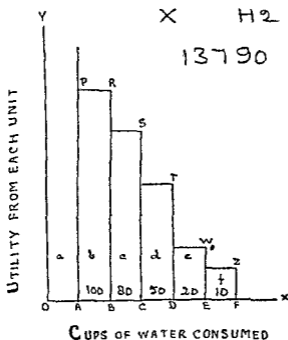
unlimited in number are yet limited in capacity. This phenomenon is called by economists the Law of Diminishing Utility or Satiable Wants. It may be stated briefly as follows :

The Law of Diminishing Utility states that the intensity of our want for additional units of a commodity diminishes as we consume or acquire successive units of it. That is to say, at any given time as the successive doses of the same commodity or service are consumed, the utility obtained from the successive doses becomes less and less, and if consumption is not stopped it may fall to zero finally passing into dissatisfaction or disutility. This tendency of diminishing utility, barring a few apparent cases which we shall discuss in the following pages, is of universal application in respect of our wants and their satisfaction. Take the case of a thirsty man with whom the utility of the first cup of water is almost immeasurable as he is prepared to pay any and everything for its acquisition. Let us say that the utility of the first cup of water is infinite for it involves a question of life and death to him. After having drunk the first cup of water, the intensity of his thirst falls and with it falls the intensity of utility also. A second cup of water is yet highly agreeable though the utility derived from the second is much less than the utility of the previous one. A third cup is still agreeable as his thirst is not altogether quenched and he will probably derive less utility from the third cup than the second one. From the fourth cup he may derive a very little satisfaction notwithstanding his use, and a limit is conceivable when he will no more feel the want of water at that particular moment and any additional supply of it instead of giving any pleasure as the previous cups produced in him will be positively a source of nuisance or discomfort. Thus, we see that with every increase in the stock of a commodity there goes a corresponding fall in satisfaction and utility that a consumer derives from the additional units of the same commodity at any particular period of time.

The relations between the successive cups of water and corresponding degrees of utility received by the consumer may be graphically represented thus :—

Along the axis OX we measure the units or cups

of water consumed and along OY we measure the degrees of utility received from the successive units. The first unit or cup of water represented by OA (or, *a*) gives an incalculable amount of pleasure or satisfaction and the rectangle is left open because the utility derived is infinite and not susceptible of actual measurement. The second



The Law of Diminishing Utility

unit, let us assume, gives 100 degrees of utility represented by the rectangle ABRP. The third unit gives 80 degrees of utility represented by the rectangle c and so forth as marked in the diagram. The diagram illustrates clearly the tendency that as identical units or cups of water are consumed at any given time, the utility of each successive unit becomes less and less than that of the previous unit till it reaches the margin of satisfaction. The rectangle *f* represents the marginal satisfaction when the utility of the last unit consumed is balanced by the sacrifice undergone or price paid for its acquisition.

The tendency to diminishing utility is manifest in all forms of consumption, and depends upon man's physical

perament, in other words, the entire outlook of the consumer must not be affected by other factors

(3) The law of diminishing utility holds good only if the period of consumption at any given time is continuous. If there is a break in the act of consumption of a particular article, then the law of diminishing utility may not operate and the successive units of that article taken after the break may produce increasing utility.

(4) If long periods of consumptions are taken into account, the consumer's income, habits, customs and fashions must remain unaltered. If the income of a person gets increased, then he may consume or acquire more of the commodity at the same or higher price although he may be having a large stock of that commodity with him. If tastes or fashions undergo a change, it is probable that the utility of successive units of a commodity may not diminish during an altogether different set of circumstances.

(5) The general level of prices must remain the same. If the price of a particular commodity falls, then the consumer may buy more of that article at the reduced price in spite of a large stock that he already has. But the tendency must operate ultimately for he cannot increase his stock indefinitely.

Allowing for these assumptions and qualifications, the Law of Diminishing Utility is almost of universal application. "The tendency (to diminishing utility) shows itself," remarks Prof. Taussig, 'so widely and with so few exceptions that there is no serious inaccuracy in speaking of it as universal.'

Exceptions to the Law of Diminishing Utility

By exceptions to the law we understand that in some cases each successive unit of a commodity, if added to the stock of a commodity a man possesses, may intensify his desire and afford increasing satisfaction up to a certain point. It should not, however, be forgotten that exceptions dealt below are only apparent and not real, as the Law of Diminishing Utility would operate ultimately in every circumstance.

(1) If our initial units of a commodity are such as to

be of no worth in our consumption, increasing utility from the acquisition of successive units of the same commodity is conceivable up to a certain point. As Silverman points out: "Thus, if 3 yds. of cloth are necessary for a garment, a cut length of 2 yds. would have less than two-thirds of the utility of 3 yds. An extra yard would thus afford increasing utility. Yet even here, it may be properly contented, diminishing utility really obtains, since 3 yds., and not 1 yd., would give a lower satisfaction than the first length." Similarly, if a few drops of water were to be offered to a thirsty man, it would intensify rather than diminish his thirst creating a keener longing for the acquisition of additional units of water. The utility will show a diminution only when a certain required quantity has been obtained by the thirsty man for quenching his thirst.

(2) A second instance of exception to the general Law of Diminishing Utility is afforded by the consumption of stimulants under the effect of which the entire attitude and temperament undergoes a complete change and the consumer begins to think that the second or third unit of liquor will bring greater pleasure and satisfaction than the previous unit consumed. Or, as Taussig remarks, to speak of higher things, the second or third reading of noble verse or the hearing of beautiful music, often gives greater pleasure than the first. But in such instances too the point of diminishing utility must come sooner or later.

✓(3) Another exception to the law is to be found in the peculiar characteristics of a commodity consumed or utilized. Taking the case of a telephone, it requires no greater attempt on our part to prove that the larger the number of telephonic connections, the greater is the utility derived by the user on account of the increased facilities of communication afforded by the extended telephonic service. But beyond a certain limit the workability of service shall suffer owing to the delay and inconvenience caused in transmitting communications.

✓(4) Another exception to the law is furnished by curious and rare things. The collectors of rare articles like ancient stamps and coins, auk's eggs and other curios and specimens of antiquity usually derive an increasing pleasure with every addition of such articles in their stock.

But in such cases too a limit must be reached when any further addition to the stock will have diminishing utility

(5) Lastly, the love of display, the lust for power and the miser's thirst for money may also be mentioned as other apparent exceptions to the general Law of Diminishing Utility

In all these exceptional circumstances the tendency to diminishing utility, however, must prevail ultimately Hence, these exceptions do not contradict the universal applicability of the Law of Diminishing Utility

Marginal Utility

The conception of 'marginal utility' closely follows the Law of Diminishing Utility According to the Law of Diminishing Utility the utility of each additional unit of a commodity diminishes, and the utility which the consumer derives from the unit which is at the end of successive consumption of that commodity is spoken as the *marginal* or *final* utility Marginal utility may be positive, zero, or negative It is positive when a consumer has to cease his act of consumption, for one reason or the other, before reaching the point of full satisfaction Marginal utility is zero when the consumer reaches the margin of full satisfaction and wants no more the consumption of that commodity at that particular moment It is generally zero in the case of free goods which can be had in plenty without any payment of any sort It is negative when the consumer is forced upon, willingly or unwillingly, to continue his consumption as to be distinctly detrimental to him

In order to illustrate the meaning and conception of marginal utility more precisely and completely let us take the case of a hungry man who has a number of loaves of bread to appease his hunger Let us assume that marginal utility from each successive unit is as follows —

Units of successive loaves of bread	Marginal Utility	Total Utility
1	50	50
2	40	90
3	25	115
4	20	135

Units of successive loaves of bread	Marginal Utility	Total Utility
5	15	150
6	5	155
7	0	155
8	-5	150
9	-15	135
10	-30	105

It is clear from the table given above that up to the consumption of six loaves of bread the utility is positive; the utility of the seventh is zero and after that it becomes negative. Ordinarily, our utility does not reach the stage of zero utility as we have to make a money payment for every unit consumed or acquired by us. The same idea may be represented by the following diagram.

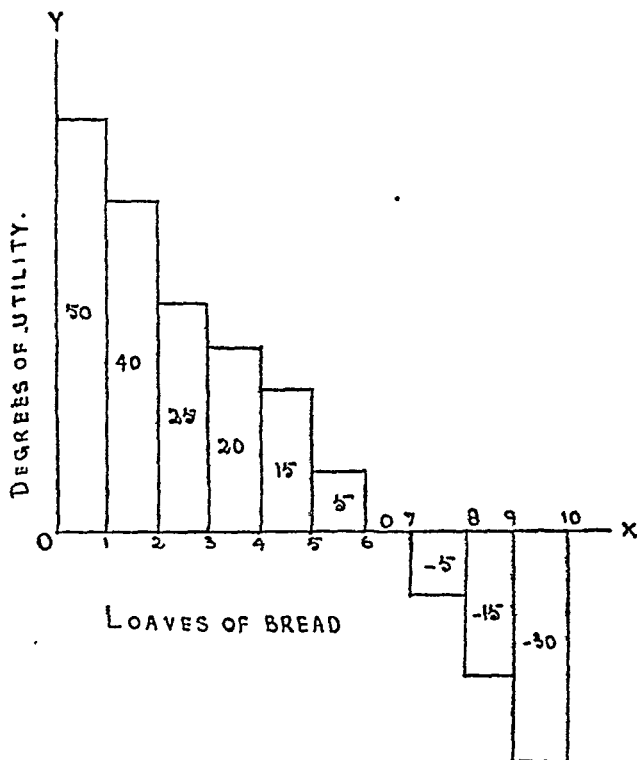


Diagram illustrating diminishing utility, marginal utility and total utility

Let OX represent the successive loaves of bread and OY the corresponding degrees of utility derived. If the hungry man of our illustration ceases his consumption after taking the sixth loaf of bread then at that particular time the sixth unit will form the marginal loaf and the utility derived by its consumption will be known as its marginal utility. The marginal utility of the sixth loaf of bread is 5 as represented in the diagram. If he had stopped after consuming the seventh loaf of bread its marginal utility would be 0. Similarly, -5 will be the marginal utility of the eighth loaf of bread if he stretched his consumption to that limit. The 'additional utility' refers to the utility derived by the added satisfaction of any single unit in the course of consumption, and it is always spoken with reference to one unit consumed at any stage of consumption. Marginal utility is the amount of utility which is derived from the last unit of supply of a commodity in a continuous consumption at a given time.

Total Utility

Although the marginal utility of a commodity, as examined above, to a consumer diminishes with every increase in the amount of its stock, the 'total utility' increases for a time. 'Total utility' refers to the sum total of all the additional utilities derived by the consumption of the whole stock of a commodity at a given period of time. The increase in total utility, however, takes place at a diminishing rate, that is to say, the increase is proportionally less than the increase in stock. To be more precise, the total utility increases up to the margin of full satisfaction, that is, the point of satiety after which it begins to decrease as any additional unit will produce disutility or negative utility. Hence it has been truly observed that when the total utility of a commodity has reached its maximum, marginal utility is zero. Reverting to the previous diagram, when seven loaves of bread are consumed the total utility is 155 and the marginal utility is zero. At this limit, the total utility is at its maximum, and the marginal utility sinks to zero. If he takes eight loaves the total utility is reduced to 150 because the amount of disutility or dissatisfaction resulting from the eighth loaf of bread must be subtracted from

the total utility. Hence, the total utility increases up to the point of satiety and it is at its maximum when the marginal utility is zero.

Consumer's Surplus

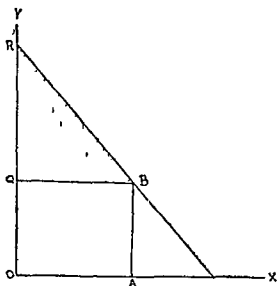
According to the Law of Diminishing Utility the utility diminishes with every addition in the stock of a commodity that a person already has while the marginal utility of the last unit of a commodity consumed at any given time just equals the sacrifice or price paid for its acquisition. Obviously, the utility derived from the earlier units of a commodity is very high and the price that a person would be prepared to pay for them would be correspondingly high. But in spite of varying amounts of satisfaction accruing from the successive units, the price paid for the different units is governed by the marginal unit purchased by a consumer. The price of all different units of the same commodity under competitive market conditions is the same at a particular time and place. Therefore, on all previous units consumed above the margin the consumer derives a surplus or an excess of satisfaction which is commonly measured by the difference between the price that one would be willing to pay and that which is actually paid. This is called in economic terminology as the 'consumer's surplus.' Prof. Marshall has defined it thus: "The excess of the price which he would be willing to pay, rather than go without the thing, over that which he actually does pay, is the economic measure of this surplus satisfaction."

Again, reverting to the example of the hungry man and keeping in view the gradually diminishing amount of satisfaction with each successive increase of his stock, let us assume that the loaves of bread are offered to him in succession and that each one is purchased at the following price *without the knowledge of more to come*.

For the first loaf the consumer is willing to pay	10 annas	✓
" " second	8 annas	✓
" " third	6 annas	
" " fourth	4 annas	
" " fifth	3 annas	
" " sixth	1 anna	
Total	32 annas	
	(Rs. 2)	

As the amount he is willing to pay for each successive loaf of bread measures the marginal utility of that loaf of bread to the consumer, it may be said that the total utility of six loaves of bread to him is the sum total of the amounts paid for each additional unit, viz, 32 annas or Rs 2. But if at that particular time the market price were one anna per loaf of bread, it is certain that he would be charged one anna for every loaf of bread in spite of his differing satisfaction from the successive units, and that he would be required to pay six annas for all the loaves of bread consumed. Thus owing to market conditions he obtains by spending six annas that satisfaction for which he would have been prepared to pay at least two rupees, and so we can say that the sum of one rupee, ten annas measures the surplus of satisfaction which he enjoys in his purchases as illustrated in our example. Consumer's surplus, therefore, is, according to Prof Taussig "Difference between the sum which measures total utility and that which measures total exchange value"

The conception of consumer's surplus may be represented by the following diagram



Consumer's Surplus

Along OX are measured the units of loaves of bread

consumed, and along OY the price paid for each respective unit. In the purchase of OA number of loaves of bread at the price OQ or AB, the total cost involved is measured by the rectangle OABQ. Whereas in order to purchase OA number of loaves of bread he would have been prepared to pay ORBA. But as it is, all the units are purchased at OQ price. The total utility obtained is represented by ORBA, the price paid is OQBA, and therefore, RQB constitutes the consumer's surplus.

This conception is of great importance in our economic studies. It draws our attention to the familiar fact that the price of a commodity is not a true measurement of the satisfaction derived from it. The price for a commodity may be very small but the satisfaction may be enormous—that is, there may be a large consumer's surplus. It enables us to determine the economic position of the different classes in a community and the stage of civilization achieved by its people. Other things being equal, the higher the stage of civilization reached, the greater is the consumer's surplus enjoyed by the people. Prof. Nicholson has criticised the conception of consumer's surplus as purely arbitrary and illusory. He remarks: "Of what use is it to say that the utility of an income of £ 100 a year is worth £ 1000 a year?" Marshall in reply to his criticism writes that there is no avail in saying that. "But there might be use, when comparing life in Central Africa with life in England, in saying that, though the things which money will buy in Central Africa may on the average be as cheap there as here, yet there are so many things which cannot be bought there at all, that a person with a thousand a year there is not so well off as a person with three or four hundred a year here. If a man pays 1d. toll on a bridge, which saves him an additional drive that would cost a shilling, we do not say that the penny is worth a shilling, but that the penny together with the advantage offered to him by the bridge (the part it plays in his conjuncture) is worth a shilling for that day. Were the bridge swept away on a day on which he needed it, he would be in at least as bad a position as if he had been deprived of eleven pence." Although the measurement of total utility and consumer's surplus is more or less hypothetical, the consumer's surplus obtained from the

existence of cheap postal, telephonic and transport services, cheap newspaper and other articles of familiar use is a real and not an imaginary conception

The Law of Equi Marginal Utility or the Law of Substitution

The law has been stated by Prof Marshall thus 'If a person has a thing which he can put to several uses he will distribute it between these uses in such a way that it has the same marginal utility in all. For if it had a greater marginal utility in one use than another, he would gain by taking away some of it from the second use and applying it to the first

It is a matter of common observation and experience that every person tends to secure the maximum of satisfaction with the minimum of sacrifice or expense. If a person has ten rupees for his expenditure he will try to spend them in the satisfaction of his competing wants in such a way that he obtains the maximum of utility out of the whole, and in order to secure that end from his given expenditure he will so distribute his expenses on various items that the marginal utility derived from the last unit of each purchase is approximately the same. Similarly, when a man has a stock of, say, 20 seers of cotton he will so tend to adjust his total consumption for his clothing requirements that the last unit of cotton expended on one item bears practically the same amount of utility as that obtained on other items. If he calculates that the marginal utility of the last unit of cotton spent on shirts is less than the additional utility which he could have obtained by adding the same unit on *pyjama*, he would necessarily like to make the change and substitute the latter for the former thereby increasing his total satisfaction from the total stock possessed by him. It has already been noticed that a consumer usually stops purchasing or consuming an article at the point where the marginal utility of the additional unit is just balanced by the money sacrifice undergone to acquire it. Consciously or unconsciously, everyone of us is continually comparing the utility of one commodity with that of another and diverting his expenditure from a less important commodity to a more important one whose satisfaction is expected to be greater. When a consumer

after a careful and judicious comparison of utilities tends to regulate his expenses on different articles of consumption in such a way as to yield equal marginal utility along each line of expenditure he is said to conform to the law of equi-marginal utility. The law states that the total utility derived from one's expenditures is at its maximum, only if the marginal utility along each line of expenditure is equal or approximately the same.

The law of equi-marginal utility is usually explained with reference to the use of money income which can be put to a number of uses, and it may be illustrated by the following hypothetical illustration. Let us assume that at a given time a labourer has fourteen annas to purchase four commodities, flour, rice, ghee and sugar. Let us further assume that he spends his sum in one anna unit successively on various articles and the degrees of utility which he obtains from successive units of each of these articles are given here on a diminishing scale and are represented by a number in each column. It may be added that according to market prices one anna gets each time in exchange eight chataks of flour, six chataks of rice, four chataks of sugar, and one chatak of ghee. It will be clear with the aid of the following table of figures how it is possible for a sensible consumer to obtain a maximum of satisfaction if the marginal utilities at the end of each purchase are made the same.

Table explaining the law of equi-marginal utility

Names of commodities			Degrees of utility from successive units					
Flour	..	..	30	24	20	17	15	7
Rice	..	..	25	19	18	15	7	6
Sugar	..	..	22	15	9	6	4	2
Ghee	..	..	23	16	15	12	8	5

As each number in the above table represents the degrees of utility enjoyed by the outlay of one anna unit, it is obvious that the labourer would first of all choose

that unit of commodity which promises to afford the greatest amount of satisfaction and the other units in order of their utilities. Always keeping this object in view he will spend his fourteen annas in purchasing five units of flour, four units of rice, two units of sugar and three units of ghee to get the maximum amount of satisfaction, and it will be seen that in his attempt to obtain the maximum amount of utility out of his limited sum, he has spent it in such a way that the utility derived from the last unit along each line of expenditure tends to be equal. The total utility which he derives out of the given expenditure amounts to regarding flour ($30 + 24 + 20 + 17 + 15$), + rice ($25 + 19 + 18 + 15$) + sugar ($22 + 15$) + ghee ($23 + 16 + 15$), or 274 degrees of utility. Supposing if he changes the order and proportion of his expenditure then his total satisfaction will decrease considerably. Hence the law may be stated thus. In order that the total utility may be maximum the consumer should distribute his given income in such a way that the marginal utility on each line of expenditure is made approximately equal.

The law of equi-marginal utility also applies to the distribution of income on future needs. Along with the present uses of money a thoughtful consumer has equally to look to his future uses of money and distribute his income on different uses present and future in such a way that they will have in each the same marginal utility. If a man receives an income of Rs 100 per month he will in order to get maximum total satisfaction out of his income will so distribute it between present and future needs that the marginal utility obtained from the last unit of money spent on the satisfaction of present wants is just equal to the marginal utility to be gained by saving the last unit of money to be spent in the satisfaction of his future needs.

Limitations to the law of Equi marginal Utility in practical life—Although the labourer in our hypothetical illustration has derived from his given expenditure maximum possible satisfaction by making marginal utilities along each line of expenditure equal, in practical life we are seldom able to make them so in spite of our constant effort and natural predilection to attain that end. The frequent

fluctuation in prices is a great handicap in the attainment of that end as it always upsets the pre-conceived calculations. Supposing if the price of flour rises while the prices of other commodities remain the same then the satisfaction derived from the expenditure of one anna unit will be less than that obtained previously, and it becomes necessary to spend something more than one anna to bring the marginal utility of flour to its previous level. This will necessitate a curtailment of expenditure on other commodities which in turn will upset completely the proportion of the distribution of expenditure on different commodities decided previous to the occurrence of the fluctuation in price.

Again, many persons due to a variety of reasons either fail or do not care to weigh and balance judiciously and correctly the utility of their marginal expenditure on each commodity as a result of which they seldom get the maximum satisfaction out of their given income and repent for the mistake. They usually comfort themselves with the idea that the advantage to be gained is much less than the unnecessary time and trouble involved in the calculation of marginal utilities along each line of expenditure and in their adjustment from time to time.

Scope and importance of the law of Equi-marginal utility—The law of equi-marginal utility in the sphere of consumption applies not only to the spending of money for the satisfaction of present wants but also to the distribution of income for future uses. This also applies to a com-
modity which can be put to several uses and employed for satisfying various wants. In the sphere of production, when a businessman or an organizer, in order to secure the maximum gain out of his investment, is substituting more profitable factor of production for a less profitable one and a more efficient one for a less efficient one, with the idea of bringing equal marginal returns from each factor of production, he is veritably conforming to the law of substitution. It has also an important bearing upon distribution inasmuch as this law lends weight to the advocacy of equal distribution of wealth amongst the various factors of production in order to maximize the social welfare. In exchange, the consumer tends to substitute a cheaper article for a dearer one in order to satisfy his want.

CHAPTER VI

DEMAND AND SUPPLY

The Meaning of Demand

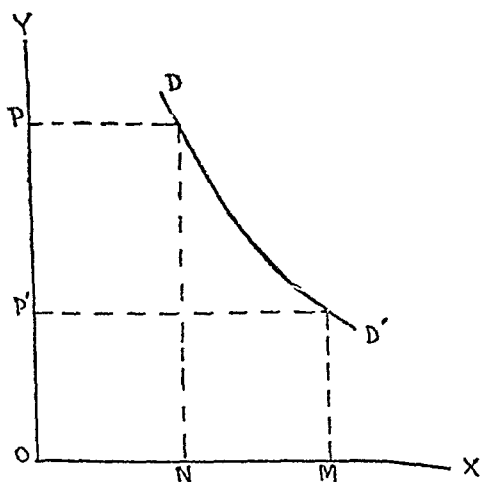
In Economics the term 'demand' is used in a very special and restricted sense. Demand is not the same thing as desire. By demand economists mean an "effective desire," that is, a desire which is backed by some means to satisfy it. Such a desire comes only from those persons who have got the *ability* and *willingness* to pay for that quantity of a commodity which they want to possess. A cultivator may have a keen desire or want to have a motor-car but if he has got no means and willingness to pay for its price, the mere desire, however strong it may be, will have no effect on the market conditions and hence it will constitute no demand in the economic sense. Demand denotes a desire backed by money or other means to purchase the quantity desired by a person at a particular time. Thus demand implies three conditions: (i) Desire for commodity, (ii) means to purchase it, and (iii) willingness to offer the means of purchase to satisfy the desire. 'Demand' and 'Want' are synonymous terms and have the same meaning in Economics.

But as demand is closely related to price, and as our demand to purchase a certain thing depends to a very great extent on the price we have to pay in exchange for it, therefore, demand has come to mean the quantity of a commodity which is demanded or purchased by people at a given price and at a particular period of time.

The quantity of a commodity demanded by a person usually differs with different prices. We can have no idea of demand unless the price is mentioned. Demand generally varies with the price. Other things being equal, if the price is high the quantity demanded will be less, while if the price is low the demand for the commodity will rise.

The Law of Demand

The law of demand is obviously based upon the law of diminishing utility as the utility of each successive unit diminishes, the price which a person is willing to pay for the acquisition of the successive units goes on decreasing, and, therefore, the law of demand declares that the quantity demanded increases with a fall and decreases with a rise in the price of a commodity at any given time. Marshall has defined the law thus: "The greater the amount to be sold, the smaller must be the price at which it is offered in order that it may find purchasers; or, in other words, *the amount demanded increases with a fall in price, and diminishes with a rise in price.*" The law of demand thus establishes a definite relation between the price and the quantity demanded, and it may be represented by the following diagram.



The Law of Demand

Measuring along OX the quantity demanded and along OY the prices it is shown that as the price falls from PO to P'O the quantity demanded increases from ON to OM, that is, the demand increases with a fall in price, and decreases with a rise in price, e.g., when prices rise from O'P to OP, the quantity decreases from OM to ON.

It must, however, be pointed out that there does not exist any uniform relation between the quantity demanded and the price. If the price of a commodity is dou-

bled, it is not necessary that the quantity demanded would be reduced to one-half. The extent of the fall in demand as a result of a rise in price depends on many factors especially on the nature of the commodity in question. The law only indicates the tendency, that a rise in price diminishes demand, and a fall in price increases demand, and it does not seek to establish, nor possibly it can, any quantitative relationship between demand and price. Moreover, the demand is influenced besides changes in price by such extraneous factors as changes in fashions, customs, tastes, the wealth of the community, the purchasing power of money and the influence of substitutes which may jointly or separately counteract the quantitative relationship arrived at any time between demand and price. So the Law of Demand declares merely that demand varies with price without indicating by how much it is likely to be affected in the case of any particular commodity. If the price falls, demand increases, and if the price rises, demand falls.

The Demand Schedule

A demand schedule is composed of a list of the different amounts of a commodity which will be purchased at different prices at a particular time and place. It is always used with reference to a single commodity at a given period of time. It may be an *individual demand schedule* or a *market demand schedule*, the former indicating the quantities of a commodity which will be purchased by an individual at different prices, and the latter representing the sum total of all the demands for a given commodity in a particular market at a particular period of time.

Ordinarily, people do not stop to think about the varying amounts of a commodity that they would purchase at each possible price, but whenever a marked fluctuation takes place in the price of a commodity, they have to consider seriously the amount of that commodity to be purchased at a price widely different from that to which they were accustomed previous to this change. To cite an example from the practical conditions of life, it may be pointed out that as a result of the excise duty levied on matches many people, particularly the poor, have

deliberately reduced through every possible economy the consumption of matches to a marked degree. It is quite possible that the price of a commodity might rise so high that for a particular consumer it may become quite prohibitive resulting in a complete cessation of his consumption, or again, the price might fall so low at any other season that the same consumer will purchase a sufficient quantity of it without any difficulty. Between these two extreme limits, a consumer has always to fix upon the varying amounts of a commodity to be purchased. Let us assume that a person having an income of Rs. 100 per month decides to frame a table or schedule in the following manner for *ghee* which he would purchase at each possible price during a month.

If the price were Rs 6 or more, he would buy no *ghee*

„	Rs. 5	he would buy	1 sr.
„	Rs. 4	„ „	1½ srs.
„	Rs. 3	„ „	2 „
„	Rs. 2	„ „	3 „
„	Re. 1	„ „	5 „
„	As. 15	„ „	6 „
„	As. 8	„ „	8 „

This is called an individual demand schedule. The schedule given above represents the Law of Demand and indicates clearly that with every fall in the price of *ghee* the quantity demanded increases and *vice versa*.

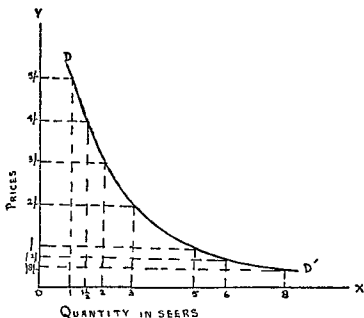
The above schedule may be graphically represented by a curve, known as the Demand Curve.

Representing along OX the quantity of *ghee* demanded and along OY the prices, it can be read from the diagram that if the price is Rs. 5 per seer only one seer of *ghee* is demanded, while if the price is Rs. 3 per seer two seers of *ghee* would be purchased, and if the price falls so low as eight annas per seer he would demand eight seers of *ghee*.

Systems of Demand

An important fact about demand deserving our attention is that all people, to whichever section of the society they may belong, demand things in groups. Man is a social being and his demands are determined partly by

his own tastes and inclinations and partly by the standard of living of the society in which he moves about. For instance, a college student's demands for books, pencils,



The Demand Curve

fountain-pen, ink, paper, a wrist watch, bicycle, a couple of suits and some neckties, etc., are all constituents of one massive group demand. Prof Chapman writes "Quite strictly speaking, it is questionable whether there is such a thing as a detached demand for any article. . . Individual things are almost, if not invariably, demanded as parts of a systematic whole."

He further adds that a person's system of demand is only gradually built up, and it is only gradually modified. In its initial form it is handed down to him by his parents, and this inheritance is supplemented, subtracted from, and remodelled, as an outcome of his education and experience and the social influences brought to bear upon him.

Joint Demand When two or more commodities are demanded simultaneously and the one cannot serve the purpose unless the other is secured, they are said to be in

joint demand. In the demand for knives, there exists a joint demand for knife blades and knife handles. Similarly, there is a joint demand for bricks, brick-layers, clay, lime, cement, masons, labourers, wood, iron, etc., in the construction of a house or building. Again, there is a joint demand for carriage and horses; shoes and laces; milk and sugar; tennis racket and tennis balls; aerated water and ice and so forth. There is, however, no fixed ratio in which complementary goods are demanded nor any hard and fast rules can be laid down respecting a large number of commodities which are in joint demand. For instance, there is a joint demand for lamps and chimneys but we cannot be definite of the ratio in which they would be demanded.

Composite Demand. When a commodity is demanded for two or more different uses, the demand for it is spoken as composite. There are many articles which can be used for more than one purpose. Milk is demanded for drinking, for making ghee, butter, curd, cheese and sweets. Coal is used for generating steam, for heating and cooking purposes, etc. The composite demand for leather consists of different demands accruing from different classes of people. A composite demand is also used to denote the total demand for a commodity from its various uses.

Increase in Demand

An increase in demand for a particular commodity denotes (i) that a greater amount of a commodity is demanded at the *same price* as before, or (ii) that the same amount of commodity is demanded as before even at a *higher price*. This tendency applies equally to the demand of an individual as well as of a market. Suppose the average demand of a market for milk is 50 maunds per day at three annas per seer. If on a festival day a larger quantity, viz., more than 50 maunds of milk is demanded at three annas per seer, or the usual quantity is purchased at four annas per seer, it will constitute an example of an increase in demand for milk on that particular day. This tendency may be graphically represented by the following diagram.

Along OX is measured the quantity of milk demanded, and along OY is represented the price DD is the old demand curve, while the new demand curve is represented by the dotted curve D'D'. The diagram illustrates the increase in demand by showing that OA quantity of milk is demanded at a higher price AP', or that an increased quantity OB is demanded at the same price AP or BN.

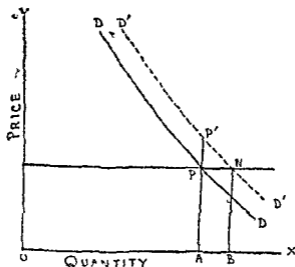


Diagram showing Increase in Demand

Elasticity of Demand

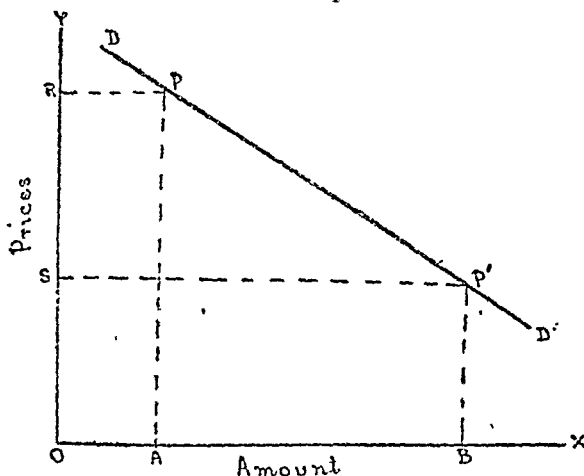
While studying the Law of Demand it was pointed out that demand for a commodity varies inversely with price that is, the demand increases as the price falls and diminishes as the price rises. Some variation is caused in the demand for a commodity by a fall or rise in its price. This sensitiveness or responsiveness of demand to changes in prices is known as the *elasticity of demand*. However, the variation in the quantity demanded in response to a change in price is not equally discernible in all commodities. The demand for some commodities increases or diminishes much more rapidly with a fall or rise in their prices than others.

The demand for any commodity is said to be *elastic* when a given rise or fall in price brings about an appreciable fall or rise in demand. If as a result of a fall in

the price of Parker Vacuumatic Fountain pen, a large number of students come forward with their demands, it may be said that the demand of the student community for this particular pen is elastic.

On the contrary, the demand for any commodity is said to be *inelastic* when a considerable rise or fall in price brings only a slight fall or rise in demand. For instance if the demand of a particular consumer for wheat does not tend to increase or decrease appreciably with a fall or rise in its price, then his demand for wheat may be termed as inelastic. The demand for absolute necessities is generally inelastic though perfect inelasticity for any commodity is seldom noticeable in practical life.

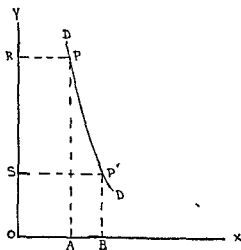
Prof. Marshall has defined elasticity of demand thus: "The elasticity of demand in the market is great or small according as the amount demanded increases much or little for a given fall in price, and diminishes much or little for a given rise in price." The elasticity of demand commonly varies with the nature of the commodity and price. If the marginal utility of a commodity is very high and if it falls rapidly as its stock increases then its demand will be more or less inelastic. The elasticity of demand varies directly with the price; it is great with high price and small with low price.



The Elastic Demand Curve

The notions of elastic and inelastic demand may also

be represented by the preceding and following diagrams
 In the preceding diagram the demand curve DD' represents the elastic demand for a commodity When



The Inelastic Demand Curve

the price is OR the quantity demanded is measured by OA . But owing to a slight fall in price OR to OS the quantity increases to OB , which is very great.

In the other diagram, the demand curve DD' represents the inelastic demand for commodity. When the price is PA or RO the quantity demanded is OA . But even when the price is considerably lowered to $P'B$ or SO the quantity demanded shows only a slight increase measured by OB . As a general rule, it may be stated that the steeper the nature of the demand curve of a commodity, the less elastic is likely to be the demand for it.

Variations in the Elasticity of Demand

The elasticity of demand varies with price. But the terms high or low price signify only a relative and not an absolute sense. The price which is relatively high to a poor man or community may be scarcely felt by a rich man or community as such. The rich man for instance may consume to his entire satisfaction a commodity whose price is almost prohibitive to a poor man, and even if a substantial fall were likely to happen in its price the latter would still find some difficulty in acquiring

the desired units of it. So the elasticity of demand without a reference to the class of people whose demand for a particular commodity we are considering bears no meaning for practical purposes. Each particular class in a society has some rough standard regarding high medium and low prices and, therefore, a price which is regarded as high by the poorer class may be regarded as medium by the middle class and very low by the rich class. The elasticity of demand for a commodity to one particular class of people is affected directly by the price. Prof. Marshall has stated that elasticity of demand within any class of society will be great for high prices, and great, or at least considerable, for medium prices; but it will decline as the price falls; and gradually fades away if the fall goes so far that satiety level is reached by the members of that class. Hence we may conclude that the elasticity of demand due to changes in price varies for different commodities; and even for the same commodity it is different for the different classes in a society.

A few useful propositions in respect of elasticity of demand are given below:—

1. *The demand for necessities is usually inelastic, while for comforts and luxuries it is elastic:—*The explanation of this general tendency is to be found in the fact that the articles of necessity cannot be dispensed with as they must be obtained more or less in the same quantity for sustenance irrespective of the price charged while the articles of comforts and luxuries can be dispensed with when their prices are high and can be purchased in larger quantities at the time of falling prices. It is remarked that in England the prices of salt, cheap medicines, many kinds of savours and flavours, etc., are so low even to the poorer classes that any fall in their price would hardly induce a considerable rise in the consumption of these. It shows that once when we have become accustomed to consume a sufficient quantity of a commodity at a given level of price any further fall in its price level will not cause any appreciable rise in our demand. But in poorer countries where even the absolute necessities are wanting the demand for them is elastic.

2. *Influence of variety of uses*.—Generally speaking, a commodity has a more elastic demand if it is required for different uses. When its price rises it tends to be withdrawn from several uses, while when its price falls the commodity is again applied to the previous uses.

3. *Influence of substitutes*.—The more suitable a substitute is available for a particular commodity, the more elastic is likely to be the demand for it. If the price of tea, for some reason or other, shows a slight rise and the price of coffee remains the same, many consumers of tea would begin to purchase coffee thus reducing considerably the amount of tea demanded. Similarly, if at any time the rates of electric light increase, people will easily divert their demand to its substitutes such as gas light or ~~petroleum lamp~~. As salt has no satisfactory substitute, its demand tends to be inelastic.

4. *Influence of habits*.—Generally, the demand for those commodities to the use of which people have been for long accustomed tends to be inelastic for they would buy more or less the same quantity in case the price rises, whereas the demand for those articles of which the consumption has not become a matter of habit is elastic as a slight rise in price would lead to a postponement of their purchases without experiencing any great inconvenience. The stronger the demand, the greater would be the inelasticity of demand.

5. *Influence of prices*.—When prices are very high or very low the demand is generally less elastic. The demand for rare wines, costly diamonds and pearls, expensive motor-cars and dresses, costly services of renowned doctors and barristers is specially confined to the people of the rich class and even if a considerable fall were to happen in their prices it would hardly induce the people of middle and poor classes to come with their demands and thus constitute no appreciable difference in the quantity demanded. Therefore at very high prices the demand of the poor classes tends to be inelastic. Again, if the price of a commodity is very low so that it is within the easy reach of the most poor the demand for it is less elastic because a fall or increase in its price will not constitute any marked difference in

the quantity demanded. Hence it follows that demand is more elastic at middling prices.

6. *Influence of distribution of wealth* :—In general, the more equal the distribution of wealth within a community, the more elastic is likely to be the demand for most commodities, whereas if there is an inequality of distribution and the wealth of the community manages to fall in the hands of the fortunate few the demand for most commodities tends to become inelastic. Taussig has stated thus : "In general, elasticity of demand is increased by an equal distribution of wealth, while an unequal distribution leads to inelasticity in demand."

Meaning of Supply

Like 'demand,' the term 'supply' is used in a very restricted sense in Economics. In the term 'supply' we do not include the entire stock that is present in the market of a particular commodity at a particular time. Only that much portion of the stock is treated as the supply which the sellers are prepared to offer for sale at the prevailing price. To quote Penson : "The stock is the quantity of goods that could be sold, the supply is the quantity that would be sold at a given price." It is the quantity of a commodity that is offered for sale at a certain price at any given time. Like demand, supply is also affected by price, though in the opposite direction. More quantities of the same commodity are put for sale in the market when the price is high because a high price enables even those producers to sell who secost of production is a little too high. There is no such thing, therefore, as supply apart from price.

The Law of Supply

Other things being equal, if the price rises then the quantity offered for sale tend to increase and if the price decreases the supply will tend to decrease. For producing the same commodity, say motor-cars, different manufacturers have their different costs of production. A price which would yield profit to one may result in a loss to another. When the price is high, even the inferior producers can sell, but a low price forces them to be out of the market altogether. Thus the quantity supplied is affected by the changes in prices.

The Supply Schedule

A supply schedule is a list of the different amounts of a commodity which the sellers are willing to sell at each possible price in a particular market and at any given time. A supply schedule can be either of an individual or of a market. If there is a list showing the different quantities of a commodity that are supplied by a certain producer at different prices under given conditions, we have what is called an individual's supply schedule, but if the list in question refers to the different quantities of a commodity that will be forthcoming in a market at different prices, such a table is the supply schedule of a market.

For example, suppose under certain given conditions of production, the following quantities of 'ghee' are supplied at various prices

	Rs a p				Mds
If the price were	1 0 0	persr	the supply of 'ghee' would be	50	
"	1 8 0	"	"	"	75
"	2 0 0	"	"	"	125
"	2 8 0	"	"	"	200
"	3 0 0	"	"	"	250

The schedule given above represents the law of supply and indicates clearly that with every rise in the price of 'ghee' the quantity supplied increases and *vice versa*. This schedule may be graphically represented by a curve known as the Supply Curve.

Representing along OX the quantity of 'ghee' supplied and along OY the prices, it is apparent from the diagram that when the price is rising the quantity supplied is going on increasing.

Uses of Demand and Supply Schedules

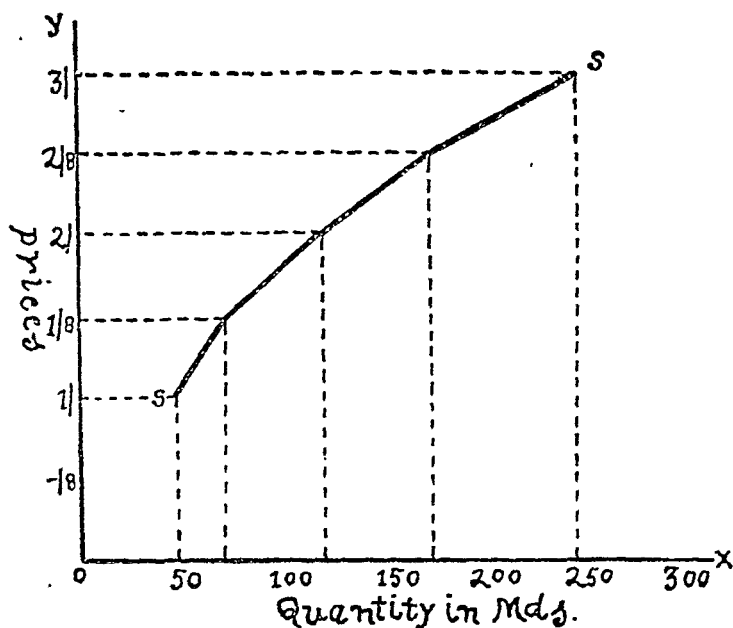
The services rendered by these schedules to a student of Economics as well as to a layman are multifarious.

1 Economic principles and ideas can be grasped much more easily with the help of these schedules than otherwise, for instance, how clear-cut the laws of demand and supply become when they are illustrated by means of schedules.

2 These schedules explain the behaviour of the

purchasers and sellers when the changes in the market price take place.

3. The understanding of the intricate problems of the elasticity of demand and supply would have been a very difficult task but for these schedules.



Supply Curve

4. The employment of these schedules brings in that much-sought-for mathematical exactitude and accuracy of ideas in matters economic and, consequently, help in the scientific advancement of this rather inexact science of Economics.

CHAPTER VII

ECONOMICS OF SPENDING AND SAVING

It is already explained that satisfaction of our wants comes through wealth which is got by our productive efforts. In many cases people satisfy a certain number of their wants by their own direct effort without the intervention of money income, more so in rural parts where villagers raise their own food crops, fruits and vegetables, bake their own bread, wash their clothes and supply many other needs directly owing to the plenty of time, space and opportunity at their disposal. However in the present age of money economy owing to improved means of transport and communication and a greater specialization of functions the villagers too, like citizens, have become increasingly dependent for the satisfaction of their wants upon others as they have to part with some portion of their income for the services rendered by others. Hence, it has become a usual practice to regard the satisfaction of wants as coming through income and as being dependent on the process known as spending.

What Spending Denotes ?

The idea of spending in modern times is very closely related to 'shops and shopping'. In villages petty shopkeepers retail goods in smaller quantities in small thatched huts wherefrom the villagers make their convenient purchases. In larger cities where population is comparatively rich the stocks are large and varied the display of fancy and attractive wares manufactured in far and wide countries greatly stimulate the demand of different customers. The villagers also find it much convenient to make their purchases from these busy centres. New wants spring up whenever they happen to come down to cities and notice therein goods exposed for sale. For them, too, shopping has now become the principal means of supplying their

wants. Thus the satisfaction of most of our wants comes through the spending of income.

A Historical Survey of Spending

An account of the methods of spending prevalent in earlier periods of human history as well as in modern times will not be out of place. With the exception of a few big cities and towns where master craftsmen maintained their shops for disposing of their articles, there were no suitable facilities in by-gone days of shopping in rural areas for the villagers. A villager formerly could get opportunities of shopping at frequent intervals whenever any pedlar or hawker happened to visit his village. He may also be noticed at the present time in big cities and towns hawking his different articles for sale from one street to another accompanied by loud none the less attractive shoutings, and his frequent visits with his wares are still valued especially to the villages which are distantly situated from towns and cities and not connected with any system of roads or railways.

Weekly or bi-weekly markets, otherwise known as *painth* in Hindustani language, is another source of shopping to the village people. A particular day for a particular locality is fixed when buyers and sellers meet together and make their required purchases. The craftsmen produce for the whole of the week and on the weekly day their goods are brought for sale. Such *painths* are still a common feature of Indian country towns where exchange transactions in goods like cereals, ghee, yarn, hides, country-made shoes, etc., are carried on on a fairly large scale.

Again, shopping opportunities are afforded to the villagers and towns people alike by the celebration of fairs or *melas* in various parts of the country at stated periods of the year. Some of these fairs are attended by a large number of buyers and sellers and bargains are struck according to the conditions of demand and supply.

Exhibitions generally organized by district authorities or such other public bodies are a modern phenomena and provide a good opportunity of shopping. At such occasions specimens of different articles of artistic designs produced by the most ingenious artisans are brought for

sale. Such exhibitions not only serve as an advertisement to the consumers but also encourage the production of goods of finer quality by enlightening the ideas of craftsmen. But in modern times owing to the localization of markets in big cities and large towns and of petty shops in villages, the pedlars, weekly markets, fairs and exhibitions have lost their importance, but in our country these agencies still provide a chief and convenient means of shopping to the consumers.

General Principles of Spending

The description given above is a brief historical account of the way in which people have tried to seek opportunities to spend their money income in satisfying their wants. Let us now discuss the general principles which seem to underlie the spending of income. The amount of satisfaction actually obtained through the spending of income depends for the most part on two things (1) the method of spending, and (2) the prices of goods and services that we purchase for consumption.

(1) *Method of spending*—We deal, first, with the question of method. Everyone as a consumer tends to secure from his expenditure or consumption the greatest of utility over cost. Penson remarks that some people are gifted with a peculiar skill in making their money go a long way, and he enumerates the following five principles in order to prove differences in satisfactions with different people.

(i) Some persons have the knack of finding out the exact thing which will satisfy their want. They are not carried away by the fashion of the time or the external appearance of things and remain quite safe from the pressure put upon them by a keen and persuasive salesman or the extremely low prices offered to them for certain articles.

(ii) They are good judges of quality. Two kinds of material may to the unskilled eye look equally good whilst in actuality the more attractive looking may in reality be of inferior quality and wear out more quickly.

(iii) They seem to know where things are to be had best and cheapest and are willing to take the trouble and incur extra time in going to such places.

(iv) They may be what is called "good hands at a bargain," and in that way obtain some advantage in the shape of reduced prices, etc., for the commodity in question. Though in organised markets 'higgling' has become a thing of the past and fixed prices have begun to be quoted by the salesmen realising the unnecessary waste of time and energy, yet in India 'higgling and bargaining' is still a chief characteristic of markets because large differences are sometimes found between the price demanded and those finally accepted. At such places these 'good hands at a bargain' get the desired thing at a lower price than that at which other less ignorant persons are found purchasing.

(v) Again, some persons are able to make sound comparisons between the claims of various competing wants both present and future. By making a comparison between different wants they try to distribute their income among the different items of expenditure in such a way as to obtain the same marginal utility in each case.

(2) *Prices of goods and Services*—To deal with the second factor, viz., the prices of goods and services, the satisfaction which a man derives out of a certain amount of income depends also upon the prices of goods and services he pays for them. If the prices of goods and services are high, the income will buy less of articles and therefore, the satisfaction will be much smaller than when prices are low and, therefore, more goods can be purchased with the same income with a consequent greater satisfaction to the consumer. It is good to point out the distinction between the 'variation in the price of a particular article and variation in prices in general.' The rise in the price of a particular commodity does not materially affect our satisfaction unless it covers a major portion of our expenditure, whereas a rise in general price level will bring real decrease in our satisfaction if the corresponding increase in income has not taken place. Hence, it is the general level of prices that commonly indicates the amount of satisfaction which will be obtained by one at the time of spending his income in purchasing a certain quantity and quality of goods and services for his requirements. "If the price level is low, it is evident that the income will suffice for many more purchases, will bring a

great amount of satisfaction. But if the price level is high fewer things can be bought, and less satisfaction can be obtained. The relation between the price level and the purchases that can be made with a certain amount of money very much resembles the action of a see saw, prices being at one end and the purchasers at the other. When one end is down the other is up, and *vice versa*."

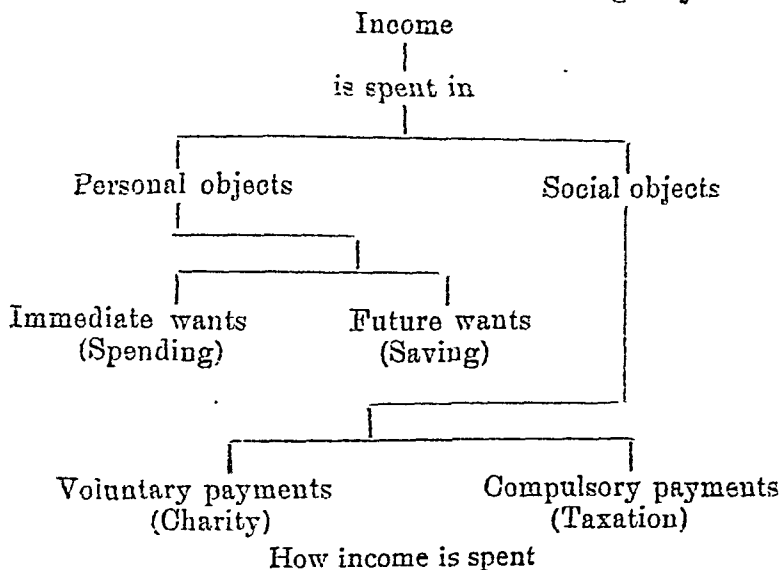
Relation of Saving to Spending

Having briefly discussed the nature of spending, its historical background, the general principles that underlie the spending side and the way in which maximum satisfaction can be secured by the consumers, let us now deal with the nature of saving and its relation to spending. The main object of income derived from economic activities is to satisfy one's wants through spending but the whole of the income is not at once spent in satisfying personal wants. A part of the income is spent on social, religious and other charitable purposes which are incumbent upon persons living in a corporate society, while some of its portion goes to the coffers of the State in the form of taxes which are also essential for the maintenance of peace and order against foreign aggressions and the promotion of social well-being inside the country. Personal expenditure is also of two kinds (i) present and (ii) future. The former is called spending in which immediate satisfaction of our wants is obtained, the latter is called saving by which a man puts aside a certain portion of his wealth for his future wants. Thus spending signifies that portion of the income which is directly consumed in the satisfaction of immediate wants.

The process of saving begins when the consumer stops present expenditure and begins to secure a greater surplus of utility from the saved wealth by applying it for future satisfactions. But saving should not be mistaken for hoarding. Mere burying money in the layers of the earth either to derive pleasure from its possession or to use it in times of need is not saving. Saving in the economic sense implies the presence of two essential conditions, *viz*, (i) postponement of present consumption of goods, and (ii) turning of wealth into capital by deliberately putting

it to productive purposes. Savings are turned into capital through various methods. We may employ the saved wealth for further production of wealth, or we may put our savings to the direction of other experts who are more capable for producing wealth, or we may deposit our savings in banks which in turn invest them in some promising enterprises.

For a clear understanding of what we have said above the following diagram should be read intelligently.



The motives leading persons to save are the sense of duty towards one's dependents, the future vagueness ever-haunting in the shape of illness, trade depression, unemployment or emergencies, etc., and the idea of making provisions for the old age when bodily organs cease to function properly and consumption remains the sole purpose of existence. The rate of interest is also one of the powerful factors inasmuch as it determines to a great extent the amount of saving a man makes. Ordinarily a higher rate of interest will induce people more to save for it will bring an increased income for a fuller life in the future.

Although we have divided spending and saving into separate compartments, if analysed critically it would

seem that they have one thing in common. As Pearson states: "In both cases wealth is given in exchange for certain goods and services, but the difference is that the goods and services are not put to the same use. In the case of spending the goods and services are applied directly to the satisfaction of wants; in the case of saving, the goods and services are applied to the production of other wealth, and so they bring satisfaction of wants indirectly instead of directly." Spending and saving are both essential features of our everyday economic life. Wealth is only produced because there is the desire to consume it but since capital, the result of saving, is one of the necessary factors of production, wealth must not only be produced for present consumption, it must be produced also for consumption at a future date. Gide writes that spending and saving are one and the same thing inasmuch as saving also leads to consumption—to spending. Money that is saved is always ultimately spent for some purpose. Only instead of being spent by its owner, it is, perhaps, spent by those who received it from him as borrowers, as labourers, or as sellers of goods. What does it matter, from the standpoint of social production whether money be spent by me or by another person?

Spending versus saving—The controversy regarding the merits and demerits of saving and spending requires a few observations and explanations. Some writers advocate spending against saving and prove that spending of incomes is the best way to benefit the society at large, while the opposite school of thought denies the truth of the argument and regards saving as the best means for the social well being of the community. Those who advocate spending maintain that a free spending even though it may involve some wastefulness promotes business, trade and industry thereby increasing the income and profits of labourers, merchants and producers. It is for this reason that misers have been ridiculed as pests of society. But this is totally an erroneous view. The production of commodities, which can only take place with the help of capital will suffer enormously because after a short time in the absence of saving a shortage of capital will be felt as a result of which the industrial

progress will be handicapped and prices will tend to rise affecting the interests of consumers adversely. It is not a sound economic policy to spend all and save nothing. On the contrary, if according to the protagonists of saving all were to save and invest their money in industrial enterprises for turning out different sorts of commodities for the people, the question arises who will purchase the increased output when the strictest economy is observed in consumption. The demand will fall much short of the total output and the whole market will be glutted with useless articles with the consequence that the country's resources will run to waste causing a complete economic deadlock. So this view is equally misleading and absurd. The truth, in reality, lies between the two extreme views. Both are necessary for economic well-being and prosperity; a balance between production and consumption, between effort and satisfaction is necessary in order to secure the maximum efficiency for each. Spending is the most important of all economic operations. The utility of saving from the social and economic standpoints is also very important and no progressive nation can afford to neglect it inasmuch as it tends to put capital at our disposal for further production of wealth. Under normal conditions the rate of interest adjusts the balance between saving and spending.

The Social Side of Spending

Having discussed spending from the purely economic and individual point of view let us now proceed to examine the social side of spending, that is to say, how the welfare of the society is affected when an individual attempts to spend his income for the satisfaction of his own wants. From the economic point of view an individual seeks to secure maximum of gratification out of a given amount of income ordinarily unmindful of the effects which his spending will exercise on the well-being of others. Also from the individual point of view no spending can be a waste unless there is a miscalculation because he pays, as we have learnt elsewhere, for an article only up to the margin at which satisfaction equals price and beyond that he discontinues purchasing. But from the social point of view such a kind of expenditure

in which the individual has derived the maximum satisfaction from his income may not be in the best interests of society and, on the contrary, may prove injurious to the general interests of society. Man is a social creature, his actions affect others as well as himself, and this is why individual liberties in spending are hemmed in with certain state laws and regulations where personal actions are considered to be pernicious to the general interests of society.

State interference in spending—Voluntary as well as compulsory spending of individuals affects society to a great extent. Our consumption decides the nature of production in the country, our charities as well as the taxes we pay affect the well being of the society, therefore, society has a right to control our consumption, and extreme views are held regarding the extent to which the State should control the expenditure of an individual. Other people maintain that as consumption is not a matter of any rule or regulation, the State should not interfere in our consumption. It depends upon our taste, custom, standard of living, and various other factors, the society cannot dictate that people should consume this thing and abstain from that thing. But the more moderate opinion and, possibly right too, is that individuals should be allowed to enjoy as much of freedom as possible in their methods of expenditure or consumption, but in those instances where any form of expenditure is distinctly injurious to the individual consumer or to other members of society the sale of such things should be controlled or regulated by the State.

In every country of note legislative measures in some form or the other have been enacted by way of regulating the sale and consumption of certain harmful commodities in order to achieve the best interests of society. For example, certain restrictions are placed on the sale of *poisons and alcoholic drinks*. Only licensed salesmen in particular places and at particular hours of the day can sell these intoxicating liquors and drugs. The sale of poisonous drugs like opium, cocaine, etc., is totally prohibited to children. Again, definite quantities have been also fixed by State regulations beyond which a licensed seller is not authorized to sell his licensed articles. All

these precautionary measures have been taken by Government because an unrestricted sale of such injurious articles generally leads to a great deal of drunkenness resulting in poverty, inefficiency, crime and social degradation.

Besides these restrictions on injurious drugs and alcoholic drinks, the state also protects the interests of consumers against the adulteration of goods particularly of the food articles such as milk, ghee, sweets, etc., essential for the bodily development, and the adulteration of which with some inferior or stale quality of articles leads to serious consequences. Food inspectors and public analysts are appointed to have a watch on the required quality of articles and instances are not lacking where offenders are given exemplary punishments for their unfair dealings. Hence, in the better interests of the society, these restrictions have been rightly imposed.

Spending and the Producers

The basis of our productive activities lies deep hidden in our demands meaning thereby that our demand for a particular article or service tends to stimulate its production. Thus spending gives direction to the production of a commodity in a country. For this reason alone our spending should be a wise one and our economic policy should always be to employ our capital and labour in industries which are of greater social advantage in preference to those which produce goods giving only a passing satisfaction or satisfying some whimsical or less useful demand of the people. If people get into the habit of wine drinking the inevitable result would be that capital and labour of the community which could have been more profitably employed in industries of greater social advantage will be diverted to the manufacture of intoxicating liquors with the consequences that besides the deteriorating effects on the health of the consumers, it will also affect adversely the interests of other members of society in a variety of ways. Hence, the drainage of productive forces from useful channels to less useful ones is condemnable both from social and economic points of view.

Spending of one class of consumers affects also that of other classes of consumers. The luxurious expenditure

of a few persons may affect the supply of necessities of the rest of the community for in its absence all the labour and capital which are now expended on the production of luxuries would have been devoted to the production of necessities of life. Such extravagant demands in general tend to produce the total welfare of society.

Spending and Idlers

Just as a particular set of consumers due to their whimsical demand for fleeting enjoyments brings about a reduction in the general welfare of the community similarly the presence of a class of idlers in a community brings about a reduction in the total national wealth and thus damages the economic welfare of the community. The idlers are spoken of as parasites and a drain on the wealth of the community as they only consume and do not aid in augmenting the total stock of national wealth. No doubt, many fortunate persons after inheriting large riches from their ancestors pass a life of ease and luxury without putting in any additional work for the increase of national dividend, but their case may be defended to a certain degree on the score that they are now enjoying the fruits of their (ancestor's) past labour. But on what moral, social or economic grounds can we defend the case of those able bodied idlers who are neither rich nor have inherited any property of their own consume the wealth of the society without adding one iota to the wealth of the community. This is one of the very common criticisms levelled against the institution of beggary in India where huge crowds of sturdy mendicants and habitual idlers in the garb of true *sanyasis* proper like drones on the wealth produced by the industrious members of the country. The able bodied professional beggars could easily support themselves by work if they chose to do so. It must also be admitted at the same time that our thoughtless and promiscuous habit of giving charity, otherwise known as *alms giving*, to these villainous mendicants whose corruption is no secret encourages their idleness, inactivity and vagrancy as they find it much more easy and comfortable to live by begging than by working with their own hands. The problem is a grave social problem as to some castes begging and living in

this world with all the paraphernalia of family enjoyments and luxuries, without working and depending upon the frugal charities of others, appears as a hereditary privilege. Thus the total amount of national wealth is reduced and over and above that a tremendous amount of wealth can be produced and utilized for increasing industrial activities of the country if they are only made and taught to do work. By this we do not mean that charity should altogether stop. Paupers who cannot work for a living, helpless widows and orphans, the blind and the cripple must all be supported by the community as it should be our bounden duty to help the suffering humanity. Only the truly deserving should receive our greatest considerations and the mendicancy should be discouraged at all costs in order to increase the productivity of the nation and the economic welfare of the country.

The Problem of Luxuries

The subject of luxury is a bit complicated one as the views expressed by economists regarding it are sometimes diametrically opposite. In fact much of the controversy has been due to a lack of a proper handling of the subject and owing to the variable nature of the definition itself. Some people justify the consumption of luxuries while others are equally emphatic in their condemnation. Let us attempt to arrive at a correct definition in order to have a proper knowledge of the subject and to avoid all possible entanglements?

Luxuries are those commodities which are not indispensable to life or industrial efficiency; they mean the gratification of a superfluous want. But they are not condemnable on that score, for, as Voltaire said, . . . the superfluous is also very necessary. Luxuries can be advocated provided they tend to raise the standard of life by stimulating consumption and production, and, as one learned economist remarks, 'we may properly wish that everybody, even the poorest people, might have a little of the superfluous, and consequently a luxury.' It is also an admitted fact that the present stage of civilization could not have been achieved without the multiplication of new wants which have been always at first regarded as superfluous and hence luxurious. With the advance of civilization and the cheapening of the com-

modities in consequence of the marvellous improvements in the means of production, the luxuries of yesterday are fastly becoming the necessities of today. And had we suppressed all our desires for luxuries in pursuance of the dictates of all those who condemn luxuries, we would have closed the very doors of economic progress and should have wandered today also like the brute savages in the remotest periods of history. Keeping in view these beneficial effects accruing from luxuries, their wholesale condemnation is not justifiable.

1 Good points about luxuries

(a) The desire for luxuries is a mark of progress and at the same time a stimulus to invention and to productive improvements. Many people put forth their best effort only because they want to indulge in luxuries. In the absence of any desire to consume luxuries much of the ceaseless economic activity and enterprise that we notice all around us would be conspicuous by its absence. It is due to this fire of ambition that man takes all sorts of enterprises with the expectation that he will enjoy a fuller life having a complete command over the most expensive luxuries of life. Many economists point out that the existence of luxuries in a community is an indication of a progressive state of society.

(b) Expenditure on luxuries leads to a transference of wealth from the rich to the poor who can make a better use of it by satisfying their more urgent wants.

(c) The beneficial effect of luxuries can be noticed in other directions as well. They are regarded as a very sound and reasonable check against any increase in population beyond the limit of subsistence because in the very nature of things people resorting to the use of luxuries will form a comparatively high standard of comfort below which they would not like to live, and would, therefore at all costs tend to maintain the same standard of comfort even refusing marriage, and if their financial conditions permit marriage they will refuse to have many children if they in any way seem to make encroachments upon their standard of life. It needs no comment that in poor families in the absence of any fixed standard of life, children are ushered into this world indiscriminately with

out having any provision for their livelihood with the result that they—ill-nourished, ill-clothed like their parents—also suffer from industrial inefficiency making the situation still cumulative.

(d) A sort of provision against a national disaster is constituted by luxury in the form of costly ornaments, etc. The possession of articles of luxury is a great security to tide over any critical period.

(e) To the extent that the production of things of luxury stimulates high grade and artistic labour there is a social value for that kind of luxury but many of the wants for luxuries are quite debased and, therefore, injurious to the interests of society.

2. *Luxuries which are socially condemnable and unjustifiable.*

Luxury is condemnable only when it results in wastefulness, when it endangers the productive forces of the wealth-producing members of the community and when the satisfaction obtained by its consumption is seriously disproportionate to the social labour consumed. Prof. Gide has dealt with this conception so critically that no apology is required to quote it *in extenso*. He writes : "From the point of view of society, the sole criterion of wastefulness is *not the amount of money spent but the quantity of wealth or labour consumed* in the satisfaction of a given want. It must always be borne in mind that the sum total of existing wealth is insufficient to satisfy even the elementary wants of the greater part of mankind, and that the productive forces which provide and increase our stock of wealth,—land, labour and capital—are all limited in quantity. All this is a problem of proportion. Unjustifiable luxury or prodigality consists in a disproportion between the amount of social labour consumed, and the degree of individual satisfaction obtained."

(a) The economic ideal should be necessities for all before luxuries for any ; luxury becomes a very great evil if the rich spend a large wealth in wasteful luxuries when a large number of persons goes ill-bred, ill-clothed and ill-housed. In India the luxury of this type is largely prevalent where the manifestations of the inequality of incomes are far more pronounced than elsewhere in the world. When millionaires roll in wasteful luxuries while

the industrious wealth-producing members suffer from the lack of a proper nourishment bordering almost on actual starvation, surely this is an evil of the greatest magnitude for in the long run it is too detrimental to the productive forces of a nation. It is pointed out that in the prosperity of the working classes lies the prosperity of the rich, if the standard of comfort of the work people upon whose labours depend their luxurious modes of life shows any fall for lack of good nourishment, proper clothing or healthful homes, the consequences to the rich will no more be salutary.

(b) The evil effects of luxuries are all the more condemnable when the poor indulge in luxuries. The large sums which the poor people spent daily for drink are not at all justifiable from the social, economic or moral point of view. Nothing to speak of the poor work-people possessing slender purses, families once prosperous and flourishing have been stamped out beyond any hope of regeneration on account of the cankerous habit of wine-drinking. "Drunkenness," writes Prof Gide, "is a terrible form of luxury, more ruinous than any other—at least for the poorer classes of society—most other luxuries being inaccessible to them."

(c) The popular belief that luxuries give employment to labour, that extravagant expenditure on capricious luxuries is 'good for trade' is quite erroneous and misleading. It is true that luxuries may give certain business a stimulus. But it remains to be seen whether or not the expenditure in the manufacture of luxuries has been rightly incurred and is in the best interests of society. Indeed the demand for luxuries creates a demand for work but it must be noted that the consumers of luxuries are making use of labour and capital which could have been invested in several industries manufacturing goods required by the community for the satisfaction of their most intense wants, and in which more workers could be employed than the workers who are engaged in producing the articles of luxury. So there would be an equal employment if the money were expended in some other industries giving more useful employment by the production of much more useful commodities from the point of view of society.

3. *Are Works of Arts Luxuries ?*

Opinions are divided and some economists prefer to classify the works of art under luxuries. But in the light of our definition we have quoted in one of the preceding pages, it should be noticed that genuine art does not require efforts and sacrifices disproportionate to the pleasure derived by the community at large, as a few days labour of the artist is sufficient to provide exquisite enjoyment that may be repeated throughout succeeding generations of mankind. Therefore, art is a justifiable luxury. Rare and beautiful works of art such as Raphael's paintings, the frescoes of Ajanta, or an exquisite works of architecture like the Taj Mahal always produce good effects, and the satisfaction obtained is much greater than the social labour consumed in their production.

What is Waste ?

We have discussed so far about the social side of spending and pointed out therein that individual spending sometimes results in wasteful consumption if considered from the point of view of society; let us now prepare ourselves to understand the economic significance of the term 'waste.' By waste we mean spending money without a corresponding amount of satisfaction in return or making efforts which do not bring a corresponding return in satisfaction.

Luxurious expenditure such as in marriage festivities when large sums of money are spent away in the display of grand banquets and fire-works, etc., is a sheer waste from the social point of view as the fleeting enjoyment involves a very disproportionate expenditure of labour and capital, though from the individual standpoint it is not a waste for the satisfaction is proportional to sacrifice involved. The amount of labour and capital now expended on a fleeting enjoyment might have been applied to more permanent uses so as to secure the maximum advantage to society.

From the point of an individual, different examples can be taken as illustrations of waste, e. g., when milk is spilt by mistake or fruits go rot and become uneatable or other articles of consumption do not yield full satisfaction to the consumer in proportion to the efforts undergone for their acquisition.

In a similar manner, destruction of wealth, whether accidental or intentional and which brings with it no satisfaction at all, is always an instance of waste. The replacement of the destroyed or spoilt wealth does not give additional satisfaction. Supposing, if houses are destroyed as a result of fire or an earthquake some ignorant people may derive consolation on the ground that this breakage or wastage will furnish masons, carpenters, blacksmiths and other persons connected with the building trade with extra work, thereby, quickening the industrial activity, but this is totally an erroneous idea if considered from the general interests of the society for the money that is now used to replace the lost houses could have been utilized in some other branches of productive activities making the trade and industrial activity equally good and brisk. On the contrary, the owners of the houses whose services they would have utilized for a much longer period of time are suddenly called upon to undertake this extra expenditure in rebuilding the houses without getting any corresponding satisfaction.

CHAPTER VIII

FAMILY BUDGETS

A complete statement of the various incomes and expenditures of a family during a certain time is called a family budget. It is evident that the expenditure of different people depends upon habits, customs, climatic conditions, ideals of life and the various physiological needs, but a detailed study of the various expenditures of different families is both interesting and instructive. In 1857 Dr. Engel, a Prussian, collected statistics of a number of German families living in different circumstances of life, and on the basis of these pointed out that there is a marked uniformity in the habits of consumption of very many classes of people. The general results arrived at by Dr. Engel about expenditure known as the Engel's Law of Consumption are :—

1. As the income of a family increases, the percentage of expenditure on food diminishes ;
2. The percentage of expenditure on clothing remains approximately the same ;
3. The percentage of expenditure on rent, fuel and light also remains nearly the same ;
4. As income increases, a constantly growing percentage is spent on comforts of life, such as education, health, recreation, amusements, etc.

Table showing the results of Dr. Engel's investigations

Items	Labourers Family Income £ 45 to £ 60 a year	Middle Class Family Income £ 90 to £ 120 a year	Well to do Family Income £ 150 to £ 200 a year
Food	60 per cent	55 per cent	50 per cent.
Clothing	15 "	18 "	18 "
Rent	12 "	12 "	12 "
Fuel & light	6 "	5 "	5 "
Education	2 "	3½ "	5½ "
Health	1 "	2 "	3 "
Recreation and amusements, etc	2 "	5½ "	6½ "
	100	100	100

It may, however, be noted that the proportion of expenditure, in a family of a particular class, on food, clothing, recreations, etc., is not the same in all the countries. Differences in habits, customs, etc. are responsible for so many variations in one's expenditure. The results of the study of Bombay Working Class Budgets by Findley Shirras also confirm the conclusions of Dr. Engel.

To an Indian student the task of collecting the statistics of consumption of Indian families is not an easy one. Illiteracy among the masses, differences in the ideals of life, various social divisions and the caste system do not allow any fixing of a standard of consumption, but attempts should be made to collect carefully the Indian statistics of consumption. It is difficult to get accurate and correct statement of income and expenditure of a family but, however, by putting carefully selected questions information can be gathered and all sources of errors

eliminated. The duty of the investigator is to put the information so collected in a manner which may easily be understood by all and be a source of education and guidance to the people of the country. The following two specimen budgets of consumption of the families of a middle class man and a labourer will give sufficient guidance to the student of Indian Economics.

Budget of Consumption of Mohna

Name and address of the head of the family	Mohna resident of Tahsil Farid- pur, District Bareilly.
Number of members in the family	Men 2, Females 2, Children 2, Total 6.
Occupation	Carpenter

BUDGET OF CONSUMPTION FOR (PERIOD) ONE MONTH

			Rs.	a.	p.
Income from his profession	..	..	21	0	0
Income from other sources (His brother is employed in a shop)	..	..	10	0	0
		TOTAL	31	0	0

INTRODUCTION

Mohna has to support a big family consisting of himself, his wife, mother, younger brother and two daughters aged 9 and 7 years. His wages are 12 annas per day and in this particular month he worked for 28 days in the house of a local zamindar, while his brother is employed in a cloth dealer's shop. The mode of living of the family is very poor and with difficulty income suffices for the maintenance of the members of the family. He lives in a very small *kachcha* house in a congested part of the town. The sanitary condition of the surroundings is very unhealthy and keeps the members in a weak state of health. Mohna is also habituated to alcoholic drinks once or twice a week.

The entire family is illiterate and the daughters are not sent to the local girls' school.

Details of the Budget of Consumption

Items of Expenditure	Expenses	Percentage	Rates, Quantity and Remarks
<i>1. Food.</i>			
Wheat Flour	3 0 0		36 srs @ 12 srs a rupee
Gram Flour	1 0 0		14 " @ 14 " " "
Barley & Jwar	1 8 0		28 " " 19 " " "
Rice	1 8 0		9 " " 6 " " "
Pulses ; Urd, Masur and Arhar	1 8 0		Urd 8 as., Masur 4 as., Arhar 12 as.
Total ..	8 8 0	27 43	
<i>2. Other Articles of Food.</i>			
Ghee	1 6 6		1½ srs. @ Rs. 1-2 per seer.
Mustard oil ..	0 8 6		1½ seer.
Sugar & Gur ..	0 14 0		As. 8 Sugar, Gur 3 seers.
Spices & Salt	0 10 0		Salt as 2, Assorted spices 8 as.
Vegetables	0 12 0	60%	Potatoes and other green vegetables.
Fruits	0 3 0		Generally he takes no fruits except when they are very cheap.
Sweetmeats ..	1 14 0		1 anna per day for daughters and self.
Milk	0 15 0		6 pies per day for daughter.
Total ..	7 3 0	23 2	
<i>3. Clothing and Shoes.</i>			
Shoes ..	1 4 0		for brother
2 Caps ..	0 5 0	11%	" self
1 Shirt ..	0 14 0		" wife
Chadar ..	1 3 0		
Total ..	3 10 0	11 7	

Items of Expenditure	Expenses	Percentage	Rates, Quantity and Remarks.
4. Rent	1 8 0	5 7/2 4.83	Per month.
5. <i>Fuel and light</i>			
Fuel	1 0 0		
Dung cakes ..	0 6 0	6 1/2	2 bottles.
Kerosene oil	0 5 0		
Vegetable oil	0 3 0		
Total ..	1 14 0	6 05	
6. <i>Education and Health.</i>			
Medicines ..	0 10 0	2 9/10	His daughter was ill for a week.
Total ..	0 10 0	2.01	
7. <i>Intoxicants, amusements and guests.</i>			
(a) Wine ..	2 4 0		
(b) Dangal Ticket ..	0 4 0		
Total ..	2 8 0	8.06	
8. <i>Social and religious.</i>			
Marriage Tika	1 0 0		Tika in a marriage of his cousin.
Religious Katha in a temple	0 2 0		
Total ..	1 2 0	3.62	

Items of Expenditure	Expenses	Percentage	Rates, Quantity and Remarks
<i>9. Miscellaneous.</i>			
Dhobi ..	0 4 0		
Barber	0 3 6		
Sweeper	0 2 0		
Charity .	0 1 6		
Pan and tobacco	0 12 0		
Letters and travelling ..	0 1 0		
Utensils ..	0 2 0		
Total ..	1 10 0	5 24	
<i>10. Saving and investment.</i>	2 7 0		
Total ..	2 7 0	7 86	
Grand Total .	31 0 0	100	

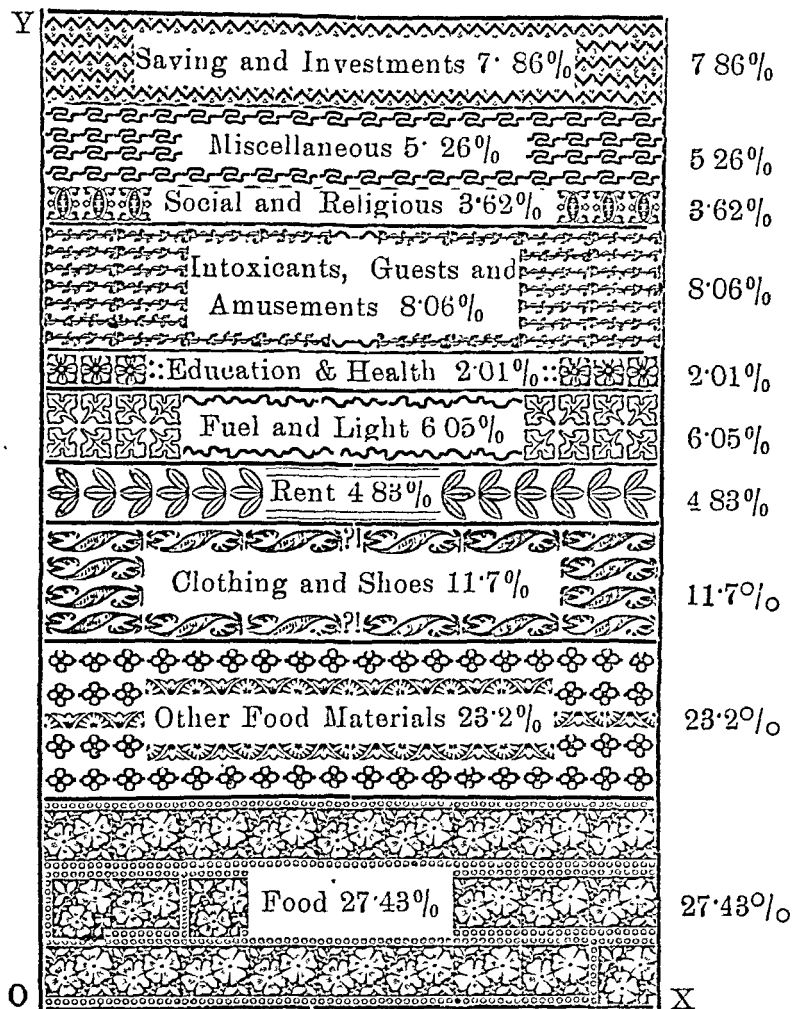
Graph showing the Budget of Consumption of Mohna's family

Period: One month.

Total Income Rs. 31

Scale OX $1'' = \text{Rs. } 10$

Scale OY $1'' = 20 \text{ per cent.}$



Rs. 31

Budget of Consumption of Dena Nath Verma

Name and address of the head of the family	Dena Nath Verma resides in Mohalla Katra, Moradabad
Number of members in the family	Men 3, Female 1, Total 4
Occupation . . Service	Manager of a big commercial firm

BUDGET OF CONSUMPTION FOR (PERIOD) ONE MONTH, 1936

	Rs	a	p
Income from his profession	155	0	0
Income from his property (<i>His house at Bareilly</i>)	9	0	0
	<hr/>		
TOTAL	164	0	0

INTRODUCTION

Dena Nath Verma is a resident of Bareilly but is employed at Moradabad on a monthly salary of Rs 155. The family lives in a well ventilated double storied house situated on the bank of the river Ram Ganga. The standard of living of the family is fairly high and is typical of a middle class family in the United Provinces. His wife is a well educated and a religious minded lady who manages household affairs efficiently. His younger brother is dependant upon him and is a student of first year Intermediate class while his son Prem Nath Verma reads in class VI in a local school. Dena Nath Verma is a great lover of music and regularly coaches his son in the art of music with the help of a friend. Every year he takes a fortnight's leave to visit some religious places in India. He keeps a regular and an accurate account of his monthly expenditures.

Details of the Budget of Consumption

Items of Expenditure	Expenses	Percentage	Rates, Quantity and Remarks
1. Food.			
Wheat flour ...	6 0 0		66srs. @ 11 srs. a rupee
Gram flour ...	0 8 0		7 " " 14 " " "
Rice ...	3 0 0		9 " " 3 " " "
Pulses—Urd, Moong, Arhar and Masoor ...	2 0 0		Moong 8 as., Urd 12 as. Arhar 8 as., Masoor 4 as.
Total ...	11 8 0	6.4	
2. Other articles of food.			
Meat ...	2 4 0		Twice a week.
Ghee ...	6 12 0		6 srs. @ Re. 1-2 per sr.
Milk ...	7 8 0		2srs. every day @ 8 srs. a rupee.
Sugar ...	2 8 0		7½ srs. @ 3 srs. a rupee
Salt & spices	1 8 0		Assorted
Fruits ...	4 0 0		Season fruits.
Vegetables ...	3 12 0		2 as. per day.
Sweets ...	4 0 0		
Total ...	32 4 0	19.7	
3. Clothing and Shoes.			
Bedding ...	2 4 0		2 Bedsheets.
Shoes ...	7 8 0		2 pairs of shoes @ Rs. 3-12 each pair.
Umbrella ...	1 14 0		
Dhotees ...	7 14 0		3 pairs of Dhotees @ Rs. 2-10 each pair.
Total ...	19 8 0	11.9	

Items of Expenditure	Expenses	Percentage	Rates, Quantity and Remarks
4. Lodging.			
House rent ...	14 0 0		Per month.
White-washing of the kitchen	1 7 0		
Total ...	15 7 0	9.4	
5. Fuel and light.			
Fuel ...	2 0 0		9 units @ 6 as. per unit. Service rental 8 as. Meter Rent 12 as.
Electricity charges ...	4 10 0		
Total ...	6 10 0	4.0	
6. Education and health.			
Tuition fees ...	9 8 0		Hisson caught severe cold.
Books and pencils ...	1 14 6		
Doctor's fee ...	2 8 0		
Medicines ...	0 10 0		One copy of the <i>Leader</i> every day.
Newspapers ...	1 10 0		
Total ...	16 2 6	9.9	
7. Jewellery, furniture etc.			
Bangles ...	1 0 0		One folding chair.
Furniture ...	2 12 0		
Total ...	3 12 0	2.3	

Items of Expenditure	Expenses	Percentage	Rates, Quantity and Remarks
8. Amusements and entertainment of guests.			
Cinema ...	3 0 0		Cinema tickets twice a month.
Total ...	3 0 0	1·8	
9. Miscellaneous.			
Pocket expenses to son & brother ...	5 0 0		Re.1 to son and Rs. 4 to brother.
Charity ...	4 4 0		Subscription for charitable purposes.
Religious ceremonies ...	2 0 0		Thread ceremony at a friend's house.
Postage ...	0 9 0		A trip of Bareilly.
Travelling ...	2 10 0		
Dhobi ...	3 4 0		With food.
Barber ...	1 8 0		
Sweeper ...	0 12 0		With food once a day.
Servant ...	4 0 0		
Maid-servant	1 8 0		
Tobacco and pan ...	2 0 0		
Miscellaneous expenditure	2 12 6		
Total ...	30 3 6	18·4	
10. Saving and Investment.			
Insurance premium ...	6 0 0		Insured for Rs. 1000. No Income-tax, his income is below 2000.
Saving in cash	20 9 0		
Total ...	26 9 0	16·2	
Grand Total...	164 0 0	100	

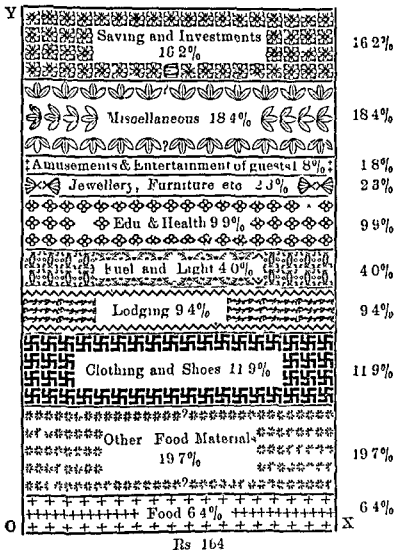
**Graph showing the Budget of Consumption of
Dena Nath Verma's family**

Period One month

Total Income Rs 164

Scale OX 1" = Rs 50

Scale OY 1" = 20 per cent



Family Budget and their Usefulness

In India some careful inquiries have been conducted very lately by economists and government officials into the working class family budgets in industrial centres and rural areas which throw a flood of light on the standard of living maintained by the Indian people.

To a consumer or householder, the utility of keeping a proper family budget is very great. By a comparison of the amount of income spent on various items in the budget, he can easily ascertain on which item he is spending more or on which items any curtailment of expenditure is possible or desirable, and thus he can manage to have maximum satisfaction out of his income by bringing marginal utilities equal along each line of expenditure. He can also strike a balance between spending and saving.

To an economist, the compilation and study of family budgets are a source of valuable and practical instruction. They afford him an opportunity of gauging the real economic status of the various classes of people and relative position with that of other countries. By a careful compilation of family Budgets the taxable capacity of the various classes can be conveniently and correctly calculated and suitable taxative measures adopted without prejudicing their productive efficiency and creating any undue irksomeness or resentment. It can also be found out whether consumption of the various classes of people is a wisely selected one or a haphazard one which is very helpful to a statesman or a social reformer for taking necessary measures. The prohibition scheme introduced in Ahmedabad and Bombay City was more a result of the painful knowledge gained by the study of family budgets of factory labourers wherein the economist found out that the major portion of their income was spent on liquor which affected very prejudicially their productive efficiency. And the social reformer and statesman thought from every point of view desirable to stop them from this drinking habit by discontinuing the sale of liquors, etc., altogether for their consumption, which ultimately told heavily upon the productive capacity of the nation.

etc. Sir Griffen once said that, "forty-two millions of people in the United Kingdom consume in food and drink alone an amount equal to the whole income of three hundred millions of people in India."

Various facts and figures can be given to show that the standard of living in India is now slowly and gradually rising. We see a change in dress, food, houses and other conveniences of life of the various types of the people living in the country. The Government also maintains that there is an appreciable improvement in the methods of living. Where house to house inquiries have been made, it has been found that the average villager eats more food and has a better house than his father, that to a considerable extent brass and other metal vessels have taken the place of the coarse earthen vessels of ancient times, and that his family possesses more clothes than formerly. Still a few palatial buildings, good clothings and better quality of food consumed by a few, cannot be an index of the prosperity of the masses. If we want to study the actual condition of the people we should study the life as it is lived in villages, the bustees and slums of the cities.

Diet of the Indian People

The quantity and quality of food consumed in India is determined by custom, religion and other prejudices rather than by purely economic considerations. The total food supply in India is not enough to maintain the people depending on it. "The Indian people are underfed and the consequences are obvious and unavoidable. The progressive deterioration in physique and energy make the additional production of food increasingly more and more difficult. This vicious circle is complete." Some people maintain that the diet of the ordinary masses is worse than that of a prisoner in an Indian Jail. The average quantity of daily diet needed by an adult living in the rural areas consists of the following:—

Grain	..... $\frac{5}{8}$ Seer.
Pulses	..... $\frac{1}{8}$ "
Vegetables or meat	..... $\frac{1}{8}$ "
Salt and spices	..... 1 Tola.
Oil	..... 1 Tola.

Ghee	.	If available
Sugar or gur	.	2½ tolas
Milk and cheap fruits	.	Not very often

Average yearly consumption in England and India compared

	ENGLAND	INDIA
Salt and spices	37½ seers	6½ seers
Food	445 "	50 "
Sugar	45 "	12½ "
Clothing	34 "	1½ "
Meat and fish	60 "	20 "
Liquors	30 gallons	1¼ gallons
Tea	3¼ seers	¾ seer
Milk	.	8 "

It will be seen from the above figures that a very low standard of consumption is maintained in this country and the people are suffering from a widespread malnutrition. It is obvious that a very large number of families must fall below the poverty line. The scale of minimum needs is very low and makes no allowance for recreations, tobacco, replacements of utensils, etc. and expenses of illness and holidays. If we make an estimate of the barest necessities and the income of the individual consumer or a family, it will be evident that there is no provision for milk in the budget of an average family. The Ministry of Health and other Welfare Associations in England advocate at least one pint of milk per day up to six years of age, reducing its quantity to a quarter of a pint before the age of sixteen years is reached. Our children get little or no milk. The sacrifices frequently made by the mother in order that her children may have more quantity of milk, present a grave problem in lowering the vitality of the motherhood. Little progress can be made in reducing infant and maternal mortality until provision is made for the exceptionally high nutritional needs of mothers.

Consumption of stale bread, dry vegetables and unwholesome articles of cheap food is practised extensively in our country. The people have yet to learn the utility of the vitamin qualities of fresh fruits and green vegetables. Utter ignorance and passive indifference play an important part in the selection of one's

diet. People consume whatever they can procure easily, without judging the nutritive value of the selected articles.

"It must be pointed out that a huge waste results from a diet that is prescribed by indifference, custom or religion rather than by strict economic considerations. In the West poverty has fixed the diet of the people. The German eats cabbage, the American eats maize, the Englishman eats margarine in place of butter not because the people have a natural taste for these things, but because these have been forced upon them by economic conditions. Everywhere poverty has dictated the food to a greater extent than appears to be the case here, where people respond to hard times by reducing the quantity consumed rather than by altering the articles consumed." For the last fifteen years there appears to be a marked increase in the consumption of wheat, ghee, meat and vegetables in place of cheap millets, oils and pulses. Many people believe that an improvement in the diet of the masses is something desirable which should be aimed at ; but from the economic point of view it is not so. An expensive diet is an economic loss unless it results in a production of a greater amount of wealth than is lost in the extra consumption ; our diet should be fixed by purely economic considerations.

Individual Income

The fact that the average income of an individual is very low cannot be disputed by anybody. The income is not even enough to cover the barest necessities, what to say of conveniences and comforts of life. Statistics of the family budgets show that the people are living below the poverty line. Major Jack classified the various classes of society into agricultural and non-agricultural and collected their annual income and expenditure as given below :—

Agricultural Families

Percentage	Income	Condition
A 50 per cent	Rs 60 per head	Living in comfort
B 28 " "	" 43 " "	Below comfort
C 18 " "	" 34 " "	Poverty line
D 4 " "	" 27 " "	Below poverty line
Non-Agricultural Families		
A 47 " "	Rs 80 per head	Living in comfort
B 27 " "	" 42 " "	Below comfort
C 20 " "	" 31 " "	Poverty line
D 6 " "	" 24 " "	Below poverty line

The total indebtedness of both the rural and urban classes in India is alarmingly great and shows the scantiness of an individual's income to satisfy his minimum needs. Many economists and well known social workers, at different periods of time, investigated the problem of income per head in India. In 1931 according to the Simon Commission Report the income per head of an Indian was 1/12 of the income of an Englishman. This is really a very optimistic estimate which is based perhaps on the income of the people living in the cities alone. The annual agricultural produce would work out to about Rs 1,200 crores. On the basis of this figure the average income of a cultivator will not be more than Rs 42 a year or less than -/1/9 per day. Even grain and other food worth -/1/9 would not be sufficient to ward off starvation what to say of purchasing other necessities of life.

Many investigators adopted different methods of estimating the National Income and got different results as shown below —

<i>Name of Investigator</i>	<i>Year</i>	<i>Income per head</i>		
		Rs.	a.	p.
Dadhabhai Naoroji	.. 1870	20	0	0
Digby	.. 1899	18	0	0
Lord Curzon	.. 1900	30	0	0
Digby	.. 1900	17	4	0
Wadia and Joshi	.. 1914	44	5	0
Shah and Khambata	.. 1922	67	0	0
Findley Shirras	.. 1921	107	0	0
	.. 1922	116	0	0

INCOME PER HEAD IN SOME OTHER COUNTRIES

<i>Country</i>	<i>Income per head</i>		<i>Annual trade per head</i>
		Rs.	Rs.
India	1. ..	67	Shah and Khambata.. 20
	2. ..	116	Findley Shirras ..
	3. ..	44	Wadia & Joshi ..
England	..	690	..390
America	..	950	..145
Germany	..	400	..230
France	..	510	..292

CHAPTER IX

✓ PRODUCTION

What is Production ?

In Economics *Production* needs a very careful explanation as it is used in a much more precise and wide sense than that ordinarily understood by a layman. Production is that branch of economic activity which is concerned with those activities of man which are directed towards the satisfaction of his wants by changing the form or arrangement of matter. It should be remembered that in this natural world, as the various physical sciences teach us, man cannot create new matter, he can only more or less change the form or arrangement so as to adapt it better for the satisfaction of human wants.

An illustration from the ordinary business of life will make the meaning still clearer. For example, we are accustomed to designate carpenter as the producer of a table. But a little reflection shows us that he has not actually produced the table but only re arranged the form of the piece of wood by cutting and fashioning it with his tools so that it becomes more useful (or, possesses greater utility) than it was in its original state. The carpenter with all his might cannot create wood. It is a natural product which in its original state cannot serve the purpose of a table, but the carpenter has produced those quantities of utilities which have the capacity to satisfy a want. The carpenter, therefore, speaking more scientifically, is the creator of utilities and not the producer as he is ordinarily designated. Man's work, therefore, consists not in creating new matter, but in creating utilities.

The creation of utilities or production may take several forms as indicated below

✓ (i) *Form Utility*. When a carpenter makes a table out of a log of wood or a tailor cuts from a roll of cloth pieces of required shape and size and sews into a shirt, they are said to have brought about a change in the form of wood or a roll of cloth respectively and created form or shape utility in them.

✓ (ii) *Time Utility*. Not infrequently the traders purchase and stock large quantities of agricultural produce at the time of the harvest and sell it after a few months when relatively there is a scarcity of food materials at a higher rate thus reaping a profit. In such a case they are called to be creating time utility. To say that the trader or a merchant is not a producer is quite fallacious. He is producing utilities just in the same manner as the person engaged in farming, rubber-growing, coal-mining or fishing etc. The only distinguishing feature is that the latter adds form utilities to the material on which he works upon and the former adds utilities of time.

✓ (iii) *Place Utility*. In creating place utility the person gives an additional utility to commodities by removing them from a place where they are less wanted to a place where they are more wanted. For instance, when a village trader transports wheat from an area of plenty to an area of scarcity, he is designated as the creator of place utility. In transporting the commodities from one place to another their value is increased. Thus the timber of the forest may be of little value until transported to the place where it is wanted by the consumers.

✓ (iv) *Service Utility*. Similarly, when a musician plays melodiously upon his piano or an actor exhibits his histrionic art, they are said to be doing some serviceable work, namely that of giving pleasure to the audience. Again, when a doctor attends to a patient or a lecturer delivers his lectures to a class, they are doing some useful service. Such a kind of effort goes by the name of service utility.

✓ Thus, *production may be defined as the creation of utilities or values by the application of men's mental and physical powers to the materials and forces of nature*. In the economic sense of the word, all those who aid in the production of utilities or bring about the satisfaction of

man's wants such as landlords, farmers, artisans, manufacturers, merchants, railwaymen, soldiers, sailors, the domestic servants, actors, musicians, commercial and advertising agents, bankers, teachers, civil servants, local government officials and domestic servants are all producers, there are, however, differences in the nature of work done by each

Classification of Productive Occupation.

From what has been stated above it is quite clear that there is a large variety of producers who are engaged in the working of creating or adding various kinds of utilities or values. S. E. Thomas in his "Elements of Economics" has classified productive occupations into three main classes —

1 Industrial occupations—They are concerned with the growing, extracting, and manufacturing of material goods. These occupations have been further sub-divided into—

(a) Extractive industries, which are engaged in obtaining raw materials from nature, e.g., farming, mining, fishing and plantations, etc

(b) Manufacturing industries, which are engaged in changing the form and arrangement of matter and materials into finished products, e.g., cotton spinning and weaving mills, paper mills, house building, etc

2 Commercial Occupations—They are concerned with the sale and purchase of goods, advertising or bringing the goods to the notice of consumers. These occupations are a link between the industrial producer and consumer. They have been further sub-divided into—

(a) Transport industries, which are engaged in carrying goods to a destination where they are wanted, e.g., railways, road transport, air traffic, shipping

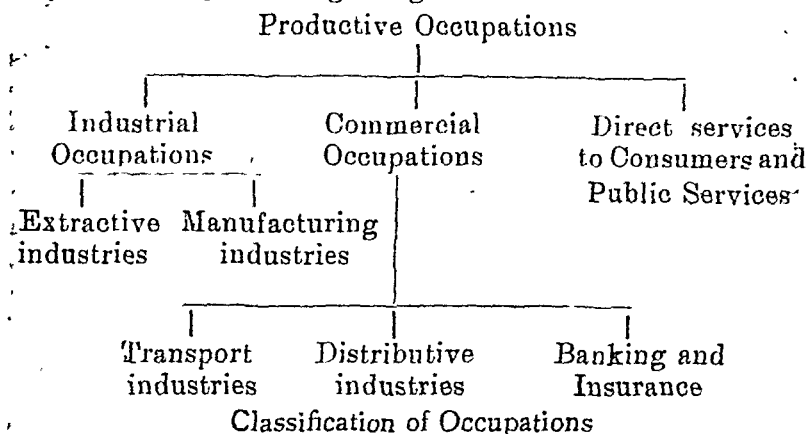
(b) Distributive industries, which are engaged in distributing goods amongst consumers, e.g., merchants, traders, commission and advertising agents etc

(c) Banking and Insurance, which are engaged in facilitating the production and exchange of goods, e.g., various types of Banks

3. Direct Services to consumers and Public Services—

The services of lawyers, doctors, teachers, musicians, domestic servants etc., come under the category of direct services ; whilst those of civil servants, local government officials, etc , under public services.

The above divisions of productive occupations may be represented by the diagram given below :—



The Agents or Factors of Production

It is already known to us that without some physical or mental exertion we cannot produce wealth and bring about the satisfaction of our wants. Besides physical or mental exertion undergone with a view to produce economic utility some extra thing is needed. Even in the most primitive stages of mankind a savage wants food but three things are necessary before he can obtain it :—(1) he must find out the place where he can catch off wild birds or animals for his food ; (2) he must make the required effort of going to forest to snare them ; and (3) he must be provided with the necessary weapons or implements of the chase. Similarly, a blacksmith must possess a smithy necessary muscular strength to work upon his materials and some tools like hammer, anvil, and blast furnace at his disposal. A potter, also, must provide himself with a house where he can carry on his work and make the required effort of digging and bringing the clay from the riverside and putting in necessary labour and skill for the making of pots and provide himself with a wheel, a stick.

and a thread, etc., which are needed in the manufacture of earthenwares. In all these illustrations land, labour and capital are needed in more or less degree without which production would have been impossible.

Earlier economists have generally spoken of three factors contributing to production, viz., Land, Labour and Capital, but with the gradual evolution of industrial organization the number of the agents of production has gone on increasing until we have now five in all.

1 *Land* Under the term 'land' the economists include not only the surface of the earth, soil or cultivable land, but also all those powers and material resources found below or above the surface of the earth, provided freely by nature for man's aid in the process of production.

2 *Labour* Labour as an agent of production includes all those human exertions, physical or intellectual, which are undergone not for their own sake but in expectation of some economic reward. Hence, the labourer may be a physical labourer who uses his muscular power or an intellectual labourer who uses in varying degrees both the faculties.

3 *Capital* Man at a very early stage realized that he could get little from nature with his unaided hands. He did require the aid of tools and implements in carrying on production and thus capital came to be recognized as the third agent of production. By capital we understand that part of a man's wealth which has been saved and is employed for the production of more wealth. We define "capital as all wealth (other than land) which is used or is intended to be used for the further production of wealth." Machines which are the results of human effort aid in the production of wealth and, therefore, are capital. The reaping hook of a farmer enables him to increase his production and his capacity for output and is, therefore, capital.

4 *Organization* With the growing size and complexity of business, introduction of division of labour, machinery and large scale production, organization came to be recognized as a separated and important agent of production. Organization refers to the superintendence of land, labour and capital for the work of production. The main function

of the organizer is to see whether the various factors of production are co-ordinated and directed in such right proportions as to yield maximum of result with the minimum of expenses of production. Indeed a careful analysis would reveal that the work of organization is nothing but a kind of labour, but it is such an important type of labour without which we cannot make much headway in the production of wealth ; hence, it has been recognized by economists as a separate and independent factor of production.

5. *Enterprise.* With the creation of mammoth factories involving the unimaginable intricacies of the forms and methods of production, the expansion of the markets as a result of the remarkable improvements in the cheap and facile means of communication and transportation and when the commodities began to be manufactured for the needs of the consumers in the distant quarters of the world, the organizer could not discharge his functions efficiently and successfully viz., that of co-ordinating the different factors of production and assuming the risk incidental to the business, and, therefore, the fifth agent of production known as the entrepreneur came to be recognized by economists as a quite distinct agent of production. Although, the risk is inherent in every form of productive effort and in every stage of human life, risks incidental to modern industry and trade are very important and their worth seems to be growing in importance with every increase in the intricacies of the industrial organization. The person who assumes the risks of a business is called entrepreneur (from the French, *entrepreneur*—to undertake) or enterpriser. He is also known as the venturer, or the captain of industry. The chief difference between the functions of an organizer and an entrepreneur is that while the former brings into harmonious activity the resources of land owners, labourers and capitalists for the purpose of production, the latter undertakes the risk and responsibilities of profit or loss and conducts the general policy of the business, the details of the management being assigned to salaried managers and superintendents. An organizer may or may not be an entrepreneur. Thus, in a private business the organizer himself is the risk-taker but in Joint—Stock

Companies the risk is borne by the shareholders and not by the organizers who are merely paid managers. In a Co-operative Producers' Association all the workers of the society are entrepreneurs as all of them combine to undertake the joint responsibility of the business.

The reader must not be led away by the idea that in the production of wealth, man requires the services of all the factors of production. This is not so, it depends upon the quality of profession he is following. For example, when a dexterous musician delights his hearers by his captivating songs, he only requires a standing room and the necessary labour in modulating his voice without standing much in need of capital or organization. Again, in spite of their presence in the production of different kinds of goods and services, the proportion in which they are combined is not the same. In the production of some goods we find a larger amount of labour, capital and organization and a small amount of land while in others the process is reverse and we find a large proportion of land to a very small amount of labour, capital and organization.

Essential Factors of Production

The factors of production are ultimately reducible to two, viz., (1) Land, and (2) Labour, which are the essential factors of production and without which no production of wealth is possible. Capital is merely the joint product of land and labour, whilst organization is a form of specialised labour. Consequently, land and labour are described as the *primary* agents of production in contradistinction to the *secondary* or *derived* factors—capital and organization.

'Of Nature and Man, Man is the active agent and Nature the passive one.' Nature in itself is not a producer of wealth, it is only by the application of labour to Nature that wealth or economic goods are produced. It is the man that forces her to yield her treasures. Therefore, Man is more important than Nature. "From every point of view," says Marshall, "man is the centre of the problem of production as well as that of consumption." But it should not be supposed that as capital and organization are only secondary factors of production, therefore, they are not at all important. In fact, capital has existed since

times immemorial and is the greatest force of modern economic processes. It is really difficult to imagine the nature of the work put forth by a worker without the aid of capital. The same may be said of organization which has become indispensable to the modern economic life, as it undertakes the co-ordination and harmonisation of the other factors engaged in productive enterprises.

Efficiency of the Factors of Production

Before attempting to find ways for the efficiency of the various agents of production, it is worth while knowing what efficiency means. By efficiency we mean the ability or capacity to achieve larger amount of work, or better kind of work, or both with comparatively minimum of trouble and expense. The better the output of a factor, quantitatively or both, the greater is its efficiency. The efficiency of a factor is also considerably increased by a proper combination of different factors under good organization and as such the efficiency of the various factors is interdependent. In the present stage of progressive economic society when human wants and desires are increasing by leaps and bounds, it should be the duty of all to seek ways and means of improving the efficiency of the different factors of production in order to bring about a greater economic welfare of the growing populations. By an inventive genius and an assiduous effort of mankind, the efficiency of the factors of production can be enhanced to a very great extent.

We have already seen that man derives his sustenance by exerting his physical and mental powers on materials furnished by nature. He, by harnessing the winds and the water and other elements of nature, has greatly added to his own productive power. The efficiency of land is judged by its productivity which can be considerably increased with better application of labour and capital, the introduction of scientific processes of cultivation and an ample provision of irrigational facilities and rapid and cheap means of communication and transport. It is with these skilful devices that barren and dreary rocks have been converted into delightful fields rich with luxuriant vegetation and bountiful harvests. Besides, a proper conservation of natural resources together with their better

utilization so as to yield additional production of goods and services with relatively cheap cost will certainly count as an increase in the efficiency of land factor. But unless the labour factor is highly efficient and organized, it is impossible to utilize the natural resources of a country in the best possible manner.

The efficiency of labour can be increased by imparting to the workpeople a practical and sound system of general and technical education. Physical strength and endurance, temperance and trustworthiness, skill and alertness, quick perception and comprehensive mental grasp, strength of memory and power of adaptation, hopefulness and resourcefulness—all these good qualities, which can be acquired through good nourishment, training, experience and social progress minister to the efficiency of labour. Secondly, in what manner labour is organized and directed counts much in its efficiency, for if it is judiciously organized and carefully directed it is bound to become much more efficient than it is otherwise.

The efficiency of capital can be enhanced by a judicious use, it should be directed in right channels and should not be invested at any cost in risky and hazardous ventures. It is also improved by the invention of the labour-saving tools and machines, by the facile credit system which enables the rapid exchange of goods with greater ease and facility. Capital should have perfect mobility in the money market.

Organization is the soul of modern industrial enterprise, as the actual work of production and bringing into full play the resources of landlords, labourers and capitalists fall on the shoulders of the organizer. On his skill, intelligence, resourcefulness and faithful services depends the economic utilization of the natural resources and ultimately the well being of the community.

CHAPTER X

✓ LAND

Definition of the Term

The connotation of the term 'land' is much wider than that understood by a layman, who understands by it merely the surface of the ground. But economists by 'land' mean not only the surface of the land but also the materials and the forces which nature provides freely for man's aid in land, water and air including such things as minerals, mountains, forests, rivers, lakes, waterfalls, sunshine, rains, wind or water-power, gravity and magnetism and the forces of the tides. Some economists have preferred to call this factor as the Gifts of Nature. But it has become common to use the word 'land' because Nature has many shades of meaning in ordinary use while land gives a definite idea if we remember that *it includes all what is below the surface and what reaches the surface from above.* Marshall defines, "By land is meant, not merely land in the strict sense of the word, but whole of the materials and the forces which Nature gives freely for man's aid, in land and water, in air and light and heat." Land should be taken to include all the materials and powers of nature which are used in the production of wealth.

Characteristics of Land

(1) The Chief distinguishing characteristic of land from all other factors of production is that its supply is fixed in quantity and cannot be increased unlike other factors of production which can be increased or decreased at will. We cannot produce with all our scientific contrivances more coal than what already exists in the bowels of the earth, or get more sunshine or rain than what are reaching us by natural processes, however urgently we

may want them. Similarly, the area of the earth's surface is absolutely limited in quantity. This inelastic supply of land is one point which more than any other distinguishes it from all other factors of production.

(2) Unlike other factors of production, land is immobile. The Indo Gangetic plain cannot be transported to the Sahara Desert of Africa or the natural resources of Kashmir to the desert of Rajputana. This characteristic has an important influence on the economic strength and prosperity of a country.

(3) Land is a free gift of nature and no man's efforts are required in its production.

(4) Land by itself, without any application of labour and capital, is of no use. It becomes useful or serviceable only when put to use by a man.

What Land does for Production ?

Land is indispensable, directly or indirectly, to all our economic activities. It is one of the primary factors of production rendering us three distinctive services —

(1) It furnishes standing room, without which nothing can be accomplished. It is required for carrying on all our economic, social and political activities that is to say, for residence and habitation, for conducting gigantic industrial operations and for constructing railways, roads and canals which are of no mean consequence in the creation of different forms of wealth.

(2) It contains those elements such as air, heat, light, water, seasons, varying temperature and many other things which are essential for the continuance of human life. It also possesses those elements which are essential for plant life thus rendering us those vegetable products which make our sustenance in this world possible.

(3) It yields from underneath the surface the rich mineral products such as coal and iron, copper and zinc, manganese and petroleum, gold and silver, and fish and pearls.

All lands are not of equal value or importance, some lands are admittedly more useful and fertile than others. The farming lands are capable of extreme differences both in fertility and in advantage of situation. Some

parts of the earth's surface are too well-known for their barrenness and aridity such as the bleak, treeless and bitter-cold Greenland and the waterless Sahara Desert; whereas, on the other hand, we have such fertile tracts as the Indo-Gangetic Plains of India or the Red Basin of China. Among the factors which determine the relative importance of land are the natural fertility of the soil, the facilities of transport and communication, patronage of the court, sanctity of pilgrimages, and the growth of industries, trade and commerce in proximity to the area in question.

Extensive and Intensive Cultivation

The cultivation of land, usually called farming, may be of two kinds: (1) Extensive, or (2) Intensive.

(1) Extensive cultivation is that system of cultivation in which we economize the use of labour and capital and use land as a free gift of nature, as far as it is profitable. In this system of farming if the farmer wants to get more produce, he takes recourse to new plots of land of inferior qualities instead of devoting his successive doses of labour and capital on the same plot of land. This type of cultivation may be noticed in newly developed countries such as Australia, Canada and the United States where extensive areas of land are available at exceedingly low prices but labour and capital are scarce and dear. The farmer cultivates the plot until its growing properties are exhausted, leaves it fallow in order to recuperate its lost energies and takes fresh plots of land into cultivation. In such countries where land can be had plentifully and cheaply labour is economized because the land is limitless and population is scanty.

(2) Intensive cultivation is that system of cultivation in which we economize the use of land, as far as it is practicable by devoting successive doses of labour and capital on the same plot of land. This type of farming is mainly practised in those countries where the available area of land is limited, the population is extremely dense, and agriculture forms the chief basis of the subsistence of the inhabitants. To satisfy the increasing demand of the growing population, the cultivator utilizes every inch of ground to its best advantage, puts in arti-

ficial chemical manures to recuperate its lost properties, adopts the scientific principle of rotation of crops and by the application of scientific machinery makes deep ploughings to secure the maximum yield from each acre of land

In extensive cultivation the produce is obtained more with the help of land, as the farmer's labour spreads over a larger area and less with the help of labour and capital, whereas, in the intensive system of farming it is procured at a greater expenditure of labour and capital with a limited quantity of land but in both cases margin of cultivation falls

In India, owing to her great density of population and its main subsistence on the agricultural industry, nearly every acre of cultivable soil has been brought under the plough and as such there is very little or no further scope for extensive cultivation. So we are obliged to practise intensive cultivation in order to meet the increasing demand of the growing population. In Burma, for example extensive type of cultivation is practised as the land available is abundant and can be had at almost no rent while labour and capital are very dear and scarce. But owing to a variety of reasons given below, the Indian cultivators are handicapped to carry on intensive cultivation to its fullest extent — (i) The endless sub division and fragmentation of holdings, as a result of the laws of inheritance found both in the Hindu and Mohammedan laws by which the ancestral property is parcelled out equally among the heirs, makes farm cultivation impossible. The holdings owned by Indian cultivators are small and scattered with consequent absence of all those economies which accrue from large scale farming, (ii) he practises farming with minimum of capital, as a result of which he cannot make any permanent land improvements to increase the productivity of his lands, (iii) dearth of water supply and the sole dependence on rainfall, (iv) in spite of his skill, honesty and industry, the Indian cultivator due to his conservative nature and ignorance still continues his cultivation with unscientific methods and fails to appreciate the new improvements in the art of cultivation, and (v) a complete absence of organized markets for the sale of rich and valuable crops is also a check to the intensive cultivation in India

Transportation and Agriculture

There is a very close connection between transportation and agriculture. The cheaper and quicker means of transportation like railways, steamships, and omnibuses have a tendency to enlarge the agricultural areas and bring distant fertile lands into the markets. As a result of their introduction many distant fertile lands have been brought under cultivation for the simple reason that the capacity of these lands is so potential that their yield can easily afford to pay transport charges and yet leave an income greater than those of the inferior land adjacent to markets. Consequently, whenever new and fertile lands are discovered and the cheap means of transport being available, agriculturists have a tendency to rush towards those areas abandoning their inferior plots of land. }

Secondly, in consequence of the availability of the cheap means of transport the character of agriculture also undergoes a complete change. Formerly, before the opening of railways, agriculture was of a subsistence type, that is to say, only those food grains were produced which were demanded by the people of the village or of some adjacent towns. But, now agriculturists have diverted their labour and capital more and more towards the raising of commercial crops at the expense of food-crops. Thus with the introduction of the cheap means of transport and communication market grows wider and wider in its extent, volume of trade expands, demand for food as well as for commercial crops considerably rises, and prices of agricultural produce tend to rise and equalize over different markets.

Thirdly, the size of cultivation also undergoes a change; people are induced to cultivate bigger plots of land than before due to the facilities provided by the cheaper and quicker means of transport.

Effect of Nature on Production

The important role played by natural resources in determining the economic life of a nation cannot be over-emphasized. Although man has acquired control over the forces of nature by harnessing them into his services, his economic progress depends still to a considerable

degree upon the materials and forces of nature. However, people of a country may be quick and intelligent, yet without having the bounties of nature they cannot make much headway in their economic prosperity. Thus, natural resources have a profound bearing on the productive capacity of a country and its people.

1 *Relief* Relief exercises a permanent influence on the economic life of man. The relief of the land which includes mountains, hills, rivers, plains, valleys and forests determines the kind of climate and production of raw materials which are directly dependent on the soil. In the hilly tracts, agriculture and industries seldom flourish owing to the absence of cheap and rapid means of transport and communication with the result that the main occupation of people in such tracts is either grazing of domestic animals, or lumbering. The Himalayas act as a reservoir to feed the great rivers of the Northern Plain, protect it from cold north winds and check the vapour-bearing winds that come from the Indian Ocean. The alluvial soil of the Indo-Gangetic Plains is so fertile that only a little amount of labour is needed to produce sufficient corn for the people. Owing to the heavy rainfall, tropical climate, numerous navigable rivers with a network of canals, flat surface of the land making the means of transport and communication both easy and quick, and the wonderful richness of the alluvial soil, the plains are the most thickly populated areas of the world. These are the few main facts which go to make India, primarily as an agricultural country.

2 *Climate* The effect of climate on the vegetation and the occupation and density of population is very decisive. In tropical countries usually the rainfall is plenty, the soil is rich and the vegetation is always green and luxuriant. Temperature and rainfall determine the nature of vegetation and upon vegetation depends, directly or indirectly, the animal life. Climate also determines the occupation of the people. The chief occupation of an Eskimo living upon the perennial snow covered shores of the Arctic Sea, is hunting and fishing. The people of India and China are generally agriculturists as the temperature is high and rainfall plenty. Climate also influences the industrial development of the country.

cooler than the loam or sandy soils because of the higher water holding capacity of the former. It is clear that the sandy soils being warm are very much liked by the vegetable gardeners who always try to put their commodities in the market as early as possible in the season.

The temperature of the soil is of considerable importance because it influences the germination of the seeds, the growth of plants at all stages, accelerates the chemical changes and the ripening of the crops. It is by means of the roots that the plants absorb their food from the soil and the soil which provides a sufficient room for deep root formation is generally very productive. The last but not the least important factor in the production of crops is the absence of injurious salts or substances in the soil.

The above six factors determine to a great extent as to which crops are suited best to any particular type of soil. In the black cotton soils of India which are deep and rich in organic matter and store a high quantity of water and also well aerated due to good drainage, we find that crops like maize, cotton and poppy flourish well. In the soils of Bengal which have a heavy soil at the bottom and the temperature is often high the rice and jute crops flourish best. In the eastern districts of the United Provinces where the soils are rather heavy and contain moisture, sugarcane thrives best. In the Punjab, we find, wheat grows well. In the clayey soils which retain water for a longer period of time by preventing it from freely descending into the earth those crops can be raised which require a greater amount of moisture for its growth. Thus by carefully studying the three phases of the soil—the physical, chemical and biological—it would be possible for the agriculturists to take the largest yield of crops without injuring the soil fertility.

Under subsoil are studied mineral products. The progress of a country in modern times depends upon the presence of iron ore, steel, coal, mineral oil, etc., and those countries which are not endowed with mineral resources generously by nature are greatly handicapped in their economic and industrial development.

5 *Coast line* It also greatly influences the character and occupation of the people. The coast line of Great

Britain contains numerous indentations and good natural harbours which afford splendid opportunities for international trade and make the nation the most enterprising and seafaring race of the world whereas, the coast-line of India is regular and remarkably deficient in good harbours which have proved a great obstacle in the development of the sea-borne trade.

6. *Situation.* From the point of view of trade and commerce geographical situation plays a very important part in the productive capacity of a country. The commercial superiority of the British Isles is due to their fine maritime position enjoyed by them. They lie in the centre of the Globe and possess suitable harbours so that they are within the reach of all the great markets of the world. Their insular position besides facilitating commerce also tends to make them more energetic, enterprising, industrious and a seafaring race. India also enjoys a maritime position of considerable importance in the markets of the world because it lies in the centre of the Eastern Hemisphere. All the trade carried on between the Western countries must pass through the harbours of India. The opening of the Suez Canal has tremendously increased the importance of India by establishing commercial relations with European countries facing the Mediterranean.

Just as the economic prosperity and advancement of a country depends upon geographical location, in the same manner depends the progress of cities and towns inside a country. Cities which are situated in the midst of fertile areas or have abundant supply of raw materials for industrial occupations and possess good means of transport and communication make rapid progress industrially and commercially than those which do not possess such advantages.

But it may be pointed out here that in modern times of progress and inventions the disadvantages of geographical location are being conquered by improved means of transport and communication, e.g., railways, steamships, posts and telegraphs, telephone, wireless and radio, etc., as a result of which distances are annihilated and practically the entire world is brought into one market.

CHAPTER XI

NATURAL ENVIRONMENT AND RESOURCES OF INDIA

In the previous chapter it has been already stated how conspicuous are the natural resources in determining the vegetation density and distribution of the population, and the occupations of the people. In fact, the physical environment is the basis of all economic activity to which India is no exception. In this chapter we will, therefore, start with an investigation into the economic conditions of India by having a brief description of her natural environment and resources.

Geographical Location

India from an economic point of view occupies a highly favourable situation as it stands almost at the centre of the Eastern Hemisphere and commands trade routes running in all directions. The country is bounded on the north by a long and lofty chain of the Himalayas, on the east by Burma and the Bay of Bengal, on the south by the Indian Ocean, and on the west by the Arabian Sea, the Sulaiman and the Hindu Kush mountains. Thus situated, India forms a unit by itself, separated as it is by nature from the rest of the world. And within its own boundaries, the country exhibits so many remarkable differences in physical features, fertility of soil, climate, products, people, language and religion that it is often remarked as a continent rather than a country.

The total area of the Indian Empire exceeds 1,800,000 square miles. The length of the country from north to south is about 2,000 miles and 2,500 from east to west. India is thus a world in herself, being fifteen times as large as Great Britain and equal to the whole of Europe excepting Russia. It maintains a population of 353 millions or, about 1/5 of the total world population which is estimated to be 1850 millions.

The coast-line of India, which is about 5,000 miles long, has a few natural indentations and no good harbours and seaports. The inlets of India get choked with sand and become so shallow that they cannot serve the purpose of navigation. The important ports of India are Bombay, Karachi, Goa, Madras, Vizagapatam, Calcutta, Chittagong and Rangoon. Bombay is the only good natural harbour of India. Madras is an artificial port constructed at enormous expense. The project of creating a harbour at Vizagapatam to supply an outlet for the undeveloped resources of a large fertile land adjacent to the east coast of India at first formulated by the Bengal Nagpur Railway, is now undertaken for construction by the Government of India. Calcutta has a well-situated harbour but the channel of the Hoogli is regularly dredged in order to keep it deep enough for the steamers. Rangoon is a natural harbour of Burma. Six-sevenths of India's foreign trade is confined to the five ports of Calcutta, Bombay, Rangoon, Madras and Karachi. Thus, from the point of view of location, there are very great possibilities of India's becoming a great distributing and clearing centre of trade if land and sea-routes are fully developed and properly utilized. At present the total volume of trade cleared by these ports exceeds Rs. 9,000 crores.

Climate and Rainfall

From the climatic point of view India may broadly be divided into two divisions : (1) the Northern India which lies in the Temperate Zone, and (2) the Southern India which lies in the Torrid Zone. The former region exhibits greater variations in climatic conditions in different provinces. In Bengal and Assam, the winter is mild and the summer moderately hot. But as we move westward the severity of heat and cold gradually increases. In the north-western part of the United Provinces and the Punjab we experience extreme heat and scorching winds like the blast of a furnace and the bitter cold in winter. Again, Upper Sind, the Punjab and western Rajputana are extremely dry, while the atmosphere of Assam and Bengal is always saturated with moisture.

In the Southern India the variations of temperature

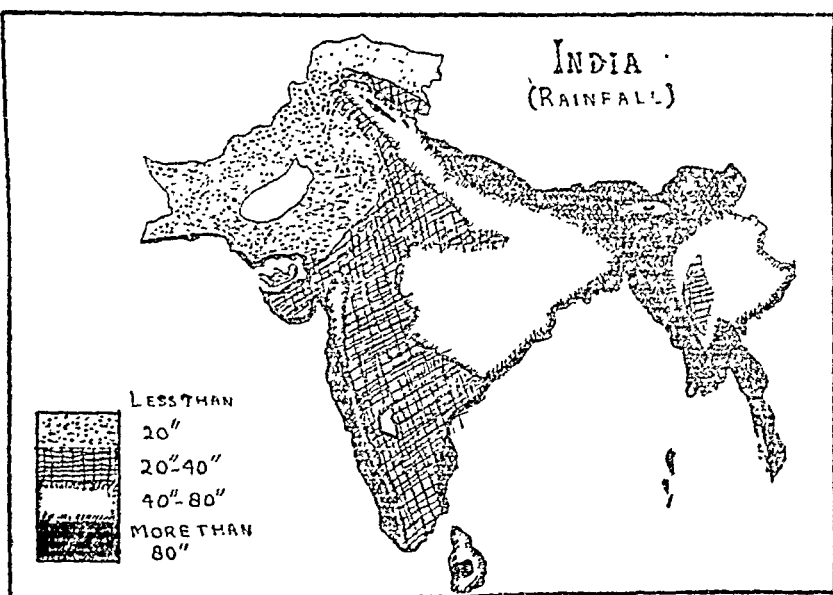
at different seasons are comparatively insignificant. It is warmer on the west coast than on the east, and the maximum coast temperature is found round the head of the Kistna river. The coasts have a smaller range of temperature and the atmosphere there is generally cloudy.

The climatic conditions influence the character, physique and occupation of the people to a considerable degree. Hard work and severe strain are very detrimental under our climatic conditions, certain tropical diseases, which are very much peculiar to India, take frequently a heavy toll of population.

The rainfall of India primarily depends upon the Monsoon climate which occurs around the Indian Ocean, especially in India and Burma. The rainy months of India can also be divided into two distinct divisions (1) the South-West or summer Monsoon which blows from the middle of June to the middle of October. It is divided into two branches one proceeding from the Arabian Sea, the other from the Bay of Bengal. The Arabian Sea Monsoon strikes the Western Ghats, gives them the heaviest rainfall about 100 inches in the year, crosses the Western Ghats only to deposit a little rainfall to the Deccan Tableland. A part of the vapour-laden clouds not checked by any mountains on the way comes to the Himalayas and the minor branch of the Arabian Sea Monsoon goes northwards and travels over Kathiawar, Sind and Rajputana but owing to the high temperature and the absence of any mountainous regions it does not give any rain to these tracts. The main cause of poor rainfall in the interior of Peninsular India is that it lies in the 'rain-shadow' of the Western Ghats. The Bay of Bengal Monsoon strikes with a great force the hills of Burma and Assam and torrential rainfall is experienced by these provinces. Cherapunji in the Kashi Hills in Assam receives the full force of the Monsoon and experiences one of the heaviest rainfalls in the world amounting to 523 inches a year. The Monsoon being checked by the lofty heights of the Himalayas travels along the Gauges Valley getting weaker and weaker as it travels westwards. (2) The North-East or winter Monsoon which turns round in January and February from the snow-

covered tracts of the Himalayas and the Iranian Tableland collect some moisture and produces rains on the Lower-Himalayas, the Punjab, the United Provinces and after crossing the sea deposits rains on the Madras coast in Southern India.

The Monsoon rainfall is very unequally distributed. It is as high as 523 inches a year in the Cherapunji Hills



and as low as 7 inches a year in Sind, Rajputana and the South-West Punjab. Again, the Western Ghats receive 100 inches of rainfall from the South-West Monsoon ; the centre of the Peninsula gets only 20 inches and in South Madras it is only 5 inches.

The rainy season is, on the whole, regular but the rains are uncertain as regards quantity. Rainfall in India is providential in its character. In some years there are torrential rainfalls, whereas in others there is either a delay in the breaking out of the Monsoon or a partial failure of rains inflicting terrible miseries upon the poor cultivators.

The importance of the Monsoon rainfall in the economy of a predominantly agricultural country like India

cannot be over emphasized as *one inch more or less* of rainfall is the only difference between the prosperity and the adversity of the agricultural masses. Perhaps in no other region of the world does the rainfall enter so much into every aspect of life as in India. It not only affects agriculture proper, but trade and commerce are largely dependent upon it while the finances of the country are closely bound up with the success or failure of crops. In fact, the general prosperity of the country depends upon the Monsoons and, the more so, upon the South-West Monsoon which accounts for nearly ninety per cent of the total rainfall.

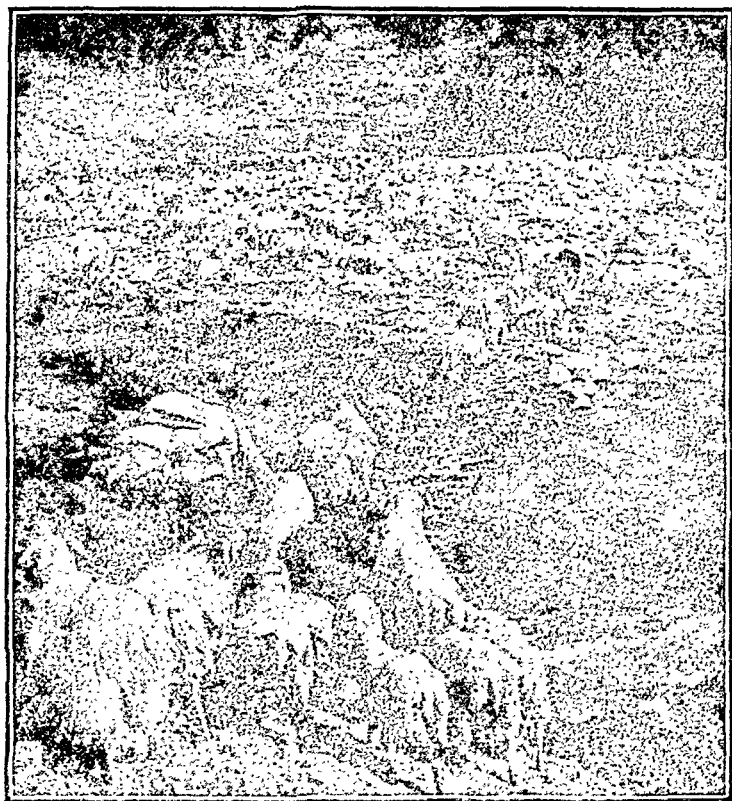
GEOGRAPHICAL DIVISIONS OF INDIA

Geographically speaking, India may be divided into four principal natural divisions

- 1 The Himalaya Mountain Region
- 2 The Indo-Gangetic Plain
- 3 The Deccan Plateau
4. The Coastal Strips

1. The Himalaya Mountain Region

The Himalayas or the *abode of snow*, some of whose peaks rise to a height of more than 29,000 feet, spread over a length of more than 1250 miles from the Indus in the north of Kashmir to the Brahmaputra in Upper Assam and form the *unpregnable* northern boundary of India. They are not a single range but contain three parallel ranges in which every possible variety of climate and vegetation is met with. (i) The Inner Range runs in a sword-like curve and owing to its lofty heights it is perpetually found covered with snow which only melts during the summer and supplies water to the rivers when agricultural lands of India are most thirsty. It also checks the cold dry winds that blow over the tablelands of Tibet from coming to the Indo Gangetic Plain. (ii) the Outer Range runs parallel to the Inner Range. Only some parts of it which are exceedingly high are found covered with snow, while the rest of it is covered with an inexhaustible store of forest trees, (iii) the Sub-Himalayan Range consists of detached ranges of low hills and is separated from the Outer Range by wide and deep valleys. The western off-shoots of the Himalayas run from north to



Transport in the Himalayas

south which consists of the Hindukush, the Sulaiman and Kirthar mountains, thus shutting in the plains of India from Afghanistan and Baluchistan. But there are many passes along these ranges, the chief being the Khyber, the Kurram, the Gomal and the Bolan, through which India's land trade is carried on with Afghanistan, Persia, etc., and as such their economic significance is very great. The eastern off-shoots of the Himalayas contain no such important passes, but there are some trade routes across the Shan hills between Burma and China. Apart from their political significance as an impregnable barrier and their effect on the moral and religious ideals of life of the people, the Himalayas have considerably moulded the economic life of the country possessing the following economic advantages :—

(a) The lofty wall of the Himalayas checks the South-West Monsoon and forces it to deposit moisture on the plains of India.

(b) They are the perennial sources of the important rivers like the Ganges, the Jumna, the Brahmaputra and the Indus which moisten the thirsty lands of the plains and endow the soil with inexhaustible fertility. Not only do these great rivers take their origin from the Himalayas but they are regularly fed in the dry and hot months of the year by water which is got by the melting of snow.

(c) They have been characterized as the region of *white-coal* in India, because they furnish us with an inexhaustible source of potential water-power.

(d) They supply a great variety of animal and vegetable products. Valuable timber such as Pine, Deodar, Chir, Oak, Sal, Fir, Bamboo, Blue Pine, and Spruce are available in these forests. A large variety of vegetables is also cultivated. Tea is largely grown in Assam, Darjeeling, Dehradun and the Kangra Valley. Many kinds of fruits are also grown especially in Kashmir, Quetta and in the western districts of Peshawar. They are also a storehouse of an inexhaustible supply of fodder. Many kinds of minerals are also found within the bowels of the Himalayas. Wild animals of the chase are not lacking in these forests.

(e) The Himalayan forests exercise a beneficial effect

the Punjab was a semi-desert tract but, now, by canalising the rivers the province has become one of the most flourishing wheat producing areas of India.

3. The Deccan Plateau

This is a rugged plateau which comprises the whole of the peninsula except the narrow coast strips and is separated from the north by the Vindhya and the Satpura ranges. With the Vindhya range as the base, the Eastern and Western Ghats as the two sides, and Cape Comorin as the apex, the plateau resembles a triangle in shape. This region affords many contrasts in vegetation and relief. Instead of being flat and smooth it is a tableland of an average height of 1,500 feet. It is cut into a few deep and narrow valleys through which the peninsula is drained by the Mahanadi, the Godavari, the Kistna, the Cauvery and the Vaigai rivers into the Bay of Bengal and by the Narbada and the Tapti into the Arabian Sea. Its rivers are very rapid and subject to many waterfalls and hence they are of little use for navigation.

The soil of the region is not alluvial but rocky and varies greatly in character and fertility. There are porous and light soils on the upland and the slopes of hills, and thicker and darker-coloured soils in valleys. The chief vegetation of the tableland consists of rich forest trees such as teak, sal, ebony, sandal-wood, cinchona and cocoanut palms. The chief agricultural products of this region are cotton, millets, oil-seeds, tea, coffee, tobacco, pulses, rice, spices and sugar-cane. Mineral products like coal, lime, iron, manganese, mica and gold are also found in good quantities.

4. The Coastal Strips

'The coastal areas of India are the narrow strips of territory formed on both sides of the triangle of the plateau by the wearing down of the edges of this tableland into alluvial coastal plains.' There is only a narrow belt of fertile land between the Western Ghats and the Arabian sea shore, about 40 miles wide stretching from the mouth of the Narbada to Cape Comorin, a fact which makes penetration inland on this side from the sea difficult, and even the Monsoon clouds are compelled to

deposit their moisture on the mountainous barrier, making the inland region peculiarly liable to draughts

The vegetation owing to the excessive rainfall and alluvial character of the soil is luxuriant. The principal products are rice, bananas, cocoanuts, jack-fruits, spices, and cardamom. The eastern coast strip which extends from the Ganges delta to Cape Comorin is considerably broader than the west coast strip. The level surface of the region makes irrigation possible by canals and affords good many facilities for the construction of railways. The region enriched by its rivers provides much low lying fertile soil, supports a dense population equal to that of the plains of the north. The climate is peculiarly different from other parts of India. It does not receive much rainfall from the summer monsoon but depends to a considerable degree upon the north east Monsoons which deposit heavy moisture in the winter season.

The Variety of Soils in India

The character and fertility of the soil is very important in the economy of an agricultural country as without a good soil we cannot raise cheap and luxuriant crops. The Indian soil may broadly be divided into three main divisions.

(1) *Alluvial Tracts* The deep alluvial tracts are the most extensive and agriculturally the most important. They occupy the greater portion of Sind, Gujrat, Rajputana, the Punjab, the United Provinces, Bengal, extensive tracts in Assam and Burma, the Gadavari, the Kistna and Tanjore districts of Madras, and strips stretching along the eastern and the western coasts of the Peninsula. The alluvial soils differ in different parts of the country as regards their physical and chemical properties. Thus in the north western India the soils are porous and dry and in some places sandy, in the United Provinces and Bihar and Orissa they are loamy and in Bengal they are more compact and moist.

(2) *The Deccan Trap Soil* The trap soil spreads throughout the Deccan and covers Berar and a greater part of the Bombay Presidency, Hyderabad, the Central Provinces and Kathiawar. On the uplands and slopes of

hills the soils are porous and light, and are generally poor, but in the lowlands the soils are more fertile. The black cotton soil occupies the area of the Deccan Trap in undulating or sloping situations, below the general level of the foot-hills. This soil is the outcome of the lava, which comes out with the volcanic eruptions. It is dark in colour owing to its mineral contents, and especially suited to the cultivation of cotton. In summer the soil cracks by which the rain-water is enabled to sink in its crevices, a process which proves most helpful in the retention of moisture for many months. It is only due to this fact that the soil is better suited for the *Rabi* crops, as in the rainy season the deep and sticky character of the soil sometimes makes cultivation a bit difficult. But *Kharif* crops are also raised in these soils.

(3) *The Crystalline Tract.* The crystalline tract occupies the lands of Mysore, a very large portion of Madras and portions of Bombay, Hyderabad, the Central Provinces, Orissa, Chota Nagpur and some tracts of Bengal, Central India and Burma. These soils differ so much from one another in the different provinces in regard to their physical and chemical characteristics that it is hardly fair to put them in one class. They are generally deficient in the nitrates and phosphoric acid. The productivity of these soils varies considerably; on the uplands they are usually sterile, such as the uplands of Mysore and Madras, and in the lowlands the soil is comparatively fertile. Rice is the chief crop in some parts where facilities of canal or tank irrigation are available. The reddish, brown or yellow-red soils of this formation found in Belgaum, Dharwar, etc., are especially suited to the cultivation of fruit trees, particularly mangoes.

"In the midst of these varying features, one characteristic is found to be common to almost all soils viz., their comparative dryness. This absence of moisture in the land makes the supply of water an absolute necessity for Indian Agriculture." (*P. Banerjea.*)

The Soil Erosion in India

The cutting away of soil particles by rain is called soil erosion. Several natural agents like the sun, wind, rain, running water, sea, etc., are responsible for the denudation of the land. Heavy rain-water, if it is not properly

controlled, has a tendency to run off the surface without percolating into the soil towards the drainage lines after washing away the most valuable and fine particles of soil and a large part of the organic matter. Soil erosion is affected by many factors —

(1) *Concentration of rainfall* In India during the Monsoons when heavy rainfall beats down on the surface of the earth and removes loose particles of the soil, the formation of deep ravines is an established fact.

(2) *The general slope of the ground* Erosion has more pronounced effects in the peninsular parts of India especially the Central Provinces and Bundelkhand than in the alluvium of the Ganges, where the ground is flat. Nevertheless it is always taking place when the rain falls in torrents. In the plains owing to the surface we meet with *sheet erosion*, in which the fine soil particles are washed away without being noticed from every part of the surface of the fields.

(3) *The nature of the soil* On similar slopes exposed to the same rainfall, light open soils lose more silt than heavier loams. Heavy black cotton soils, which swell up when wetted, are probably not denuded so readily as the lighter soils found in peninsular India. The dry tracts are also affected by the water that rushes over them.

The Great Loss

The annual loss to agriculture as a result of soil erosion is incalculable. The gradual denudation of the soil and the organic matter thereof is the real economic drain in India. The evil consequences of which are to be seen in the south of the Jumna in Bundelkhand, in the deep ravines formed on both sides of the Chambal in Dholpur and Gwalior States, etc., where even armies can safely hide themselves without being found out. Even in the great alluvial plains of India where at first sight the ground seems to be perfectly flat, the damage is considerable. The left bank of the Jumna has lost thousands of acres of fertile land owing to the formation of a mischievous network of ravines, which produce little more than a crop of grass during rainy seasons. In the United Provinces alone the actual total area of these ravines is about millions of acres and is constantly increasing and if unchecked will eventually prove disastrous consequences to our agricultural industry. "Villages," Mr A. Howards

observes, "which at one time were surrounded by fertile fields; now lie in a network of useless gullies." Every year incalculable amount of productive soil is being washed out to the ever-hungry oceans through these ravines.

Secondly, as a result of the torrential nature of our rainfall, the water rushes violently along the drainage lines without being soaked by the soil, which has resulted in the lowering of the sub-soil water-level, so that the water-level of the wells has gone down causing hardships and inconveniences to the agriculturist in a numberless ways.

Lastly, water-logging is often associated with erosion which causes a great loss to available nitrogen and a destruction of the porosity of subsoil resulting in the low yield and poor quality of the produce.

Prevention of Erosion

Both water-logging and erosion take place when the run off is not properly managed and the water is allowed to gain velocity and strength on its way to the drainage lines. Some methods are within the easy means of cultivators. They should cultivate their fields during the hot weather before the advent of the Monsoon rainfall in order to prevent them from the cutting action of the rain or the running water. The well-ploughed and thirsty surface of the soil will absorb much of the early rains and check the eroding action of the running water. Secondly, the intensity of the erosion will be lessened on slopy grounds if they are ploughed perpendicularly to the slope. Again, the erosion can be prevented by an afforestation at the head and sides of the ravines as the roots of trees bind the particles of the soil together and their foliage protect the soil from the heavy bursts of rain.

Embankments though absolutely necessary where other methods of controlling the erosion have failed present many difficulties, e.g., heavy expenditures, expert engineering skill, etc. The Indian cultivator is poor and ignorant and too slow to appreciate the value of any change except by actual demonstration. Government advice backed by monetary support is necessary for the successful erection of embankments and drainage projects.

PRODUCTS OF LAND

Area of cultivated and uncultivated land in India

Total	.. 68,76 lakhs acres
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Total area in Indian States	1,96 lakhs acres
Total area in British India	66,80 "
Net area cultivated	22,69 "
Current fallows	5,22 "
Culturable waste	15,42 "
Not available for cultivation	14,46 "
Forests	8,98 "

Area under Food and Non food Crops

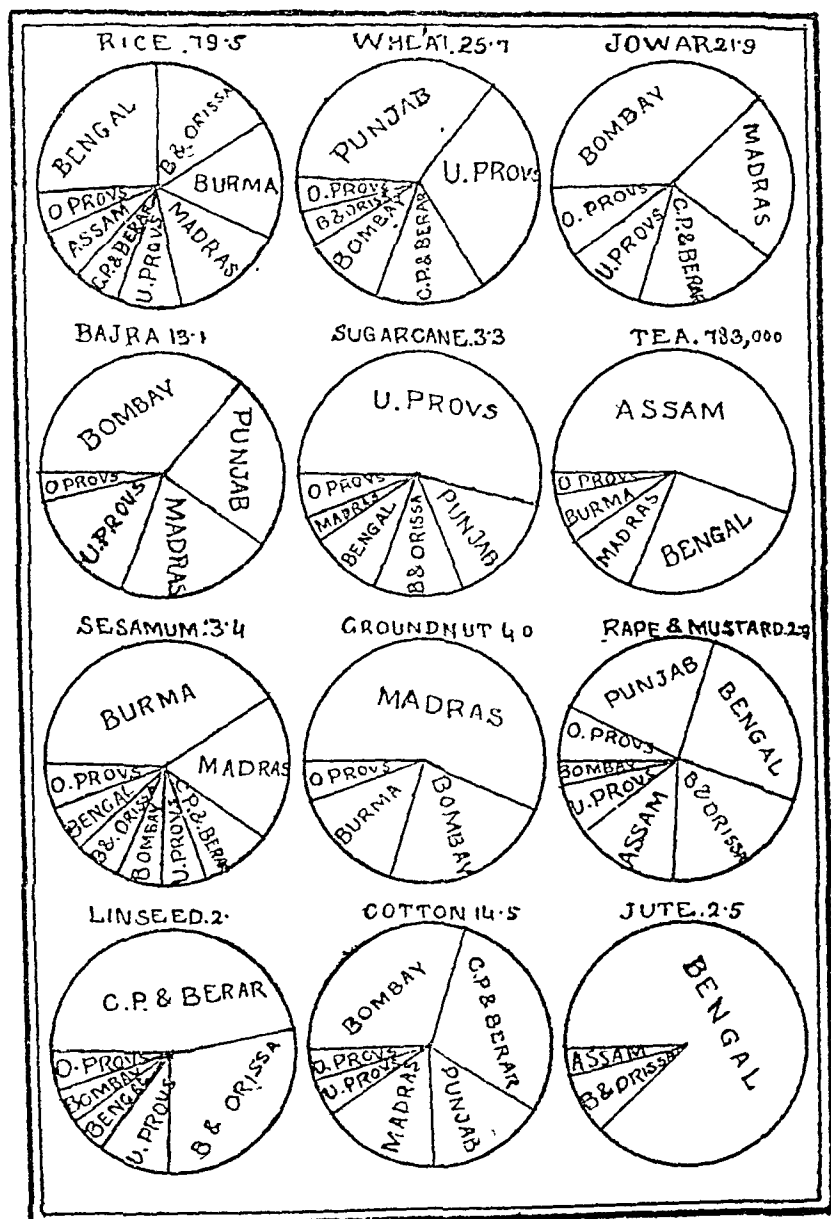
Total area sown	259 1 million acres
Area under food crops (unshaded)	212 6 "
Area under non-food crops (shaded)	46 6 "

RICE 79 5		WHEAT 5 1		FRUIT 2 VEGETABLES 4 3
		JOWAR 21 9		
GRAM 13 7	BAJRA 13 1	BARLEY 6 6	MAIZE 1 2	SUGARCANE 3
		RICE 3		
OTHER FOOD CROPS 34 3				
COTTON 14 5	OTHER CROPS 10 5	LUTE 2 5	RAPE / MUSTARD 3 0	SISAMUM 3 4
			LINSEED 3	GROUNDNUT 4 0 8
OTHER NON-FOOD CROPS 68 1 1				

The products of land can conveniently be studied under three different divisions —

- 1 Agricultural 2 Mineral 3 Forest

Shares of Provinces in the total area (in acres)
under principal crops in 1938-99



1 Agricultural Products

Agriculture is the most preponderant industry of India, about 70 per cent of her population depends directly on agriculture and of the rural population nearly 90 per cent is directly or indirectly related to this premier national industry. The food crops occupy the most important place among the agricultural products, which cover nearly four fifths of the total area sown, but the non-food and commercial crops have also evinced a tendency to increase in area owing to its high world prices. The annual cost of the agricultural produce has been estimated at a little lower than 1,200 crores of rupees.

There are two crops taken out of the soil in two agricultural seasons viz., the *Kharif*, or the summer crop, and the *Rabi*, or the winter crop. As the *Kharif* crops require a plentiful supply of water, they are sown at the beginning of the south-west monsoons and harvested between September and October. The *Rabi* crops, which need less rainfall, are usually sown in October and harvested in spring (March and April). During the hottest months of May and June when the whole country is scorched with the western winds, the land is allowed to rest. The raising of crops depends much upon the character and the fertility of the soil.

Agricultural products may broadly be classified under two heads —(A) Food crops and (B) Non-food crops.

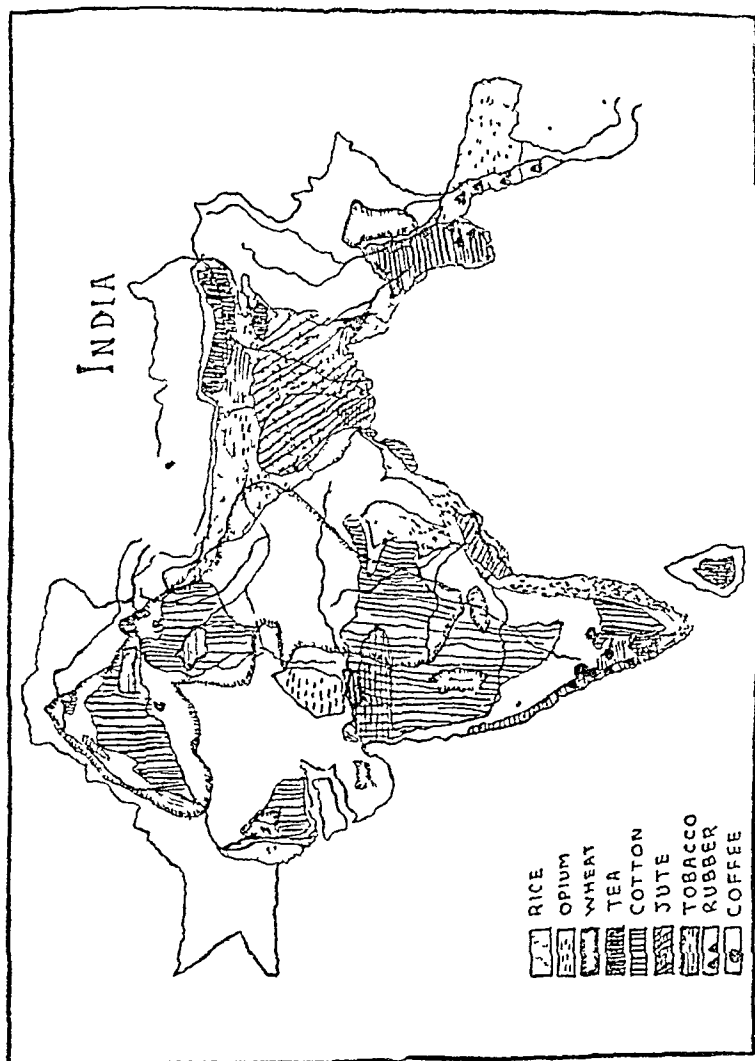
A Food Crops

(i) Rice is the principal crop of India as it forms the staple food of the most of the people of the country, and it occupies about 30 per cent of the total cultivated area. It is an aquatic plant and flourishes most in those areas where climate is hot and damp, soil is deep and fertile, and rains are abundant and assured. The provinces in which rice is grown in large quantities are Bengal, Burma, Bihar and Orissa, Assam, Madras, Bombay and in those areas of the United Provinces, the Central Provinces and the Punjab which receive a sufficient and assured quantity of rainfall. Bengal produces more than the half of the total produce. India's contribution to world production of rice is about 40 per cent. But the entire produce of rice is consumed in India and it is not exported to any foreign country.



Transplanting rice seedlings from the nursery

There are innumerable varieties of rice ranging from very fine to very coarse one. In Bengal there are two



main harvests. In Madras three crops are raised in one year where canal irrigation is possible. In other provinces there is only one crop, which is a *Kharif* one. The acreage under rice is more than 79.5 million acres with a total yield of about 34 million tons of cleaned rice. The

yield per acre compare very unfavourably with the production in other countries. If improvements are made in its cultivation, the value of rice produce would be more than 700 crores of rupees.

(ii) *Wheat* stands next to rice. It covers about 25.7 million acres of land or nearly 10 per cent of the total cultivated area with a total yield of more than 10 million tons of wheat. It requires alluvial soils, cool climate at the time of sowing, slight rain at intervals, warm and dry climate during the ripening months. Light clays and heavy soil loams are the most suitable for its cultivation. Almost in every province of India cultivation of wheat is practised, but the Punjab, the United Provinces, the Central Provinces, Rajputana, Bihar and Orissa and Bombay produce it in great quantities. The United Provinces and the Punjab account for nearly two thirds of the total area and three fourths of the total yield.

With the exception of U. S. A. and Russia, India is the largest wheat producer in the world. India exports wheat chiefly to England through the port of Karachi, but in recent years there has been a marked tendency of decrease of wheat exports. The quality of wheat is considerably enhanced by the improved qualities of wheat such as Pusa No 12 variety, introduced by the Agricultural Department. The total area under improved varieties of wheat is now about 5 million acres. The surplus available for export purposes is never very large. About 15 per cent of the annual yield goes out of the country chiefly to the United Kingdom. It is estimated that the extension of irrigation, the rapid means of transport and the introduction of better quality of seed will increase the Indian yield of wheat per acre to a great extent.

The average yield per acre in India and in certain other countries is —

				lbs
India	.	..	..	636
U. S. A.			.	846
Canada	..		..	972
Australia		..	.	714
Argentina	..		..	780

Europe	..	..	..	..	1,148
Russia	..	..	..	..	636

A sum of Rs. 60½ crores represented the total hypothetical value of the Indian wheat crop based on the production in the year 1935-36, calculated on an average price of Rs. 2-6-0 per maund obtainable in the up-country markets.

(iii) *Barley* is a Rabi crop and is cultivated and harvested along with the wheat crop. It is grown to a small extent all over India but chiefly in the United Provinces and the Punjab. It is used as food both for man and cattle. It is mainly a food crop of the poorer classes and a small quantity is exported outside. The area under cultivation is about 7 million acres.

(iv) *Maize* requires a warm climate with abundant and frequent rains. In the initial stages of its growth, heavy rainfall is almost fatal; it is sown in the month of June or July with the commencement of monsoon rains and harvested after a lapse of about two months. It is grown practically all over India, but in the United Provinces it is an important crop and forms a staple food of the poor population.

(v) *Millets*. There are several varieties of this crop, the chief being *jowar*, *bajra*, and *ragi* which are grown extensively in almost every part of India. They are used both by men and cattle and in some of the drier parts of India they form the staple food of the people. They do not need as thorough a cultivation as wheat and are rarely manured, although *jowar* responds handsomely to high manuring. They do not require much water and can even flourish in those areas where the rainfall is as low as 20 inches. The crop is generally sown in the beginning of the monsoon, but *jowar* is both a *Kharif* and a *Rabi* crop. It is often grown mixed with the summer pulses, especially *arhar*, which stands in the field for the whole of the year and is harvested along with the *Rabi* crops. *Bajra* is a dry crop and grown extensively in Madras, Bombay, Rajputana, the Central Provinces and in the western districts of the United Provinces. It is the mainstay of the population in very dry tracts of India. *Ragi* is the principal food of Mysore, Madras and the adjoining districts of Hyderabad.

(vi) *Pulses* 'They are commonly grown throughout India in great variety and form at once the backbone of the agriculture, since even the present moderate degree of soil fertility could not be maintained without leguminous rotations and a primary necessity in the food of a vegetarian population' 'The pulse crop is believed by agriculture chemists to be a good fertiliser, as the deep-rooted plants deposit nitrogen in the soil thus recuperating the lost properties of the soil considerably' 'The principal varieties of pulse crops are *chana* (gram), *arhar*, *urad*, *mung*, *mash*, *masoori*, and *kalai* They are of universal consumption in India and are chiefly raised in the United Provinces, the Punjab, Bombay, the Central Provinces, Bihar and Orissa, and Bengal

(vii) *Fruits and Vegetables* India has so much diversity of elevation, climate, soil and rainfall that there is no vegetable product of temperate, sub tropical, and tropical zones which cannot flourish here 'The importance of fruits and vegetables in the dietary of Indian people who are mostly vegetarians is very great. India grows a variety of fruits such as mangoes, pears, grapes, peaches, apricots, strawberries, etc. There is also grown a large variety of vegetables and edible roots like potatoes, brinjals, cabbages, tomatoes, cauliflower, onions, garlic, ginger, turmeric, radish and turnips. The market for vegetables and fruits is comparatively limited owing to their perishable nature. But it is hoped that with the dawn of horticultural knowledge among the people, development of transport and the provision of cold storage facilities, 'a new era of abundant supply of fruits and vegetables' will set in. Condiments and spices are chiefly grown in the extreme south of India on the Malabar coast and in Travancore. Pepper, chillies, cardamom, cinnamon, and cloves are some of the noted spices of India

(viii) *Sugar* *Sugar-cane* is an indigenous plant of India which requires alluvial soil and an abundant supply of water. The climatic conditions necessary for the growth of sugar-cane are a long warm season, a good rainfall and a good soil of average fertility. Where the supply of rainfall is scanty, artificial irrigation is necessary

for its cultivation.. It is chiefly grown in the United Provinces, the Punjab, Bihar and Orissa and Bengal. The crop is usually planted from March to April, not by seeds but from cuttings, and is harvested from November to February. It is a perennial plant and one plant bears shoots for many years but since its output diminishes, it proves economical to renew the plants every two or three years or even annually.

India, until recently a large importer of sugar, is nevertheless one of the most important sugar-cane growing and sugar consuming countries in the world, the area under the crop being above 4·5 million acres—a little less than half the world acreage producing sugar-cane. We not only consume the entire quantity of raw and refined sugar produced in our country, but also import a large quantity of foreign sugar. With the grant of protection by the Sugar Industry Protection Act of 1932, a definite incentive to the increase in cane cultivation by modern methods has been given. The old varieties of cane like 'Dhaur,' 'Chun' and 'Angol' have been replaced by Coimbatore, Orissa and Java varieties. The sugar-cane industry owes a great deal of its progress to the work of sugar-cane breeding stations, but still the yield of cane per acre in India is much less than in Japan, Mauritius, Java, Cuba and Hawaii. There is still a very great scope for further improvements in cane cultivation. It is hoped that the newly constituted Imperial Institute of Sugar Technology and the funds granted by the Imperial Council of Research for breeding improved varieties of cane and for dealing with the diseases of sugar-cane will make India produce more sugar than it requires for home consumption. People have already begun to show some concern at the alarming expansion of acreage under cane cultivation. The Sugar Committee has recently decided to start the proper sugar marketing survey, to adopt the zone system for each factory and to carry on a number of research experiments.

B. Non-Food Crops

(i) *Cotton* occupies a very important position among the commercial and the export crops of India. It is a sub-tropical crop and requires a peculiar kind of soil. A

brilliant sunshine, a light soil with lime, which can retain moisture for a considerable period, are the favourable conditions for its growth. The black cotton soil of the Deccan, which consists of deep dense clay, is most suitable for its raising. The plains of Gujarat and Kathiawar, the highlands of the Deccan, the Central Provinces and Berar, Hyderabad, Central India, Sind, the Tinnevely, Madura, Coimbatore and a few other districts of Madras, the United Provinces and the Punjab are the principal cotton producing tracts in India. About half of the total produce is raised from the black cotton soil of the Deccan. There are two main crops, the early crop and the later crop, the former is mainly grown in the Central and the Northern India while the later in the Southern and the Western India. Thus it is grown from March to August and harvested from October to April.

The quality of cotton produced in India is inferior and the yield per acre is also less to that grown in the United States and Egypt. In India it is £90 per acre, but in the United States and Egypt it is £200 and £400 respectively. India produces short-staple cotton, which is not very much suitable for spinning high count yarns. But now efforts are being made by the Agricultural Department to introduce long staple cotton in India and to improve the quality and yield of Indian cotton. Although the efforts to cultivate Egyptian cotton in Sind failed, the American cotton is being successfully cultivated in Bombay, the Punjab and the United Provinces. To check the systematic deterioration of Indian cotton and to improve its marketing conditions, the Indian Central Cotton Committee was appointed in 1921. Under its control and direction the quantity and the quality of cotton grown here has improved. The total area under cotton is about 15 million acres and the total output is more than 6 million bales of cotton of £400 each. Our mills are consuming more than 45 per cent of the yield and are producing about 850 million lbs of yarns per year.

India has always been a large exporter of raw cotton to foreign countries and nearly half of the total produce is exported annually to Japan, China and the continent

of Europe, but now owing to the trade depression and war the total export is being much lessened.

(ii) *Jute* is the next important fibre after cotton and occupies about 3 million acres of land. It requires moist and alluvial soil which remains submerged under water where the plants are growing. Thus its production is confined mainly to Bengal, Assam, Bihar and Orissa. The soil is enriched by alluvial deposits brought by river inundation and is thus made suitable for the growth of this exhausting crop without any manure. It is a *Kharif* crop being sown from March to May and harvested in the months of August and September. In the fertile valleys of the United Provinces about 2938 acres have come under jute cultivation. India exports jute both in raw and manufactured state. The United Kingdom, Germany, Spain, France, Japan, China, the United States, Italy and Belgium are the chief customers of India. The value of jute exported to these countries exceeds Rs. 72 crores.

(iii) *Oil-Seeds*. There are several kinds of oil-seeds e.g., linseed, sesamum, rape and mustard, ground-nut, cocoa-nut, castor, cotton seed, *mowra*, niger, coriander, cummin, *ajitan*, and *kardi* which are grown in Bengal, Bombay, the Central Provinces and Madras; elsewhere they are grown as mixed crops; and are raised both as *Rabi* and *Kharif* crops. They form important crops in every part of India and are put to many different uses. Linseed is a crop mainly raised for oil. It is largely exported to foreign countries. Its cake is used both as a fodder and a manure.

Sesamum or *til*, a *Kharif* crop being sown in July and harvested in November or December, is largely exported for soap making purposes. It is also used for food purposes. Burma and the United Provinces are the principal growers of it. Ground-nuts are chiefly cultivated in Madras and Bombay, and have shown striking expansion in recent years. Rape and mustard are *Rabi* crops which cover about 6.88 million acres of land, including 2.68 million acres in the United Provinces, on which mixed crop is raised. Cocoa-nuts are important sources of oil and much possibilities are awaiting its full

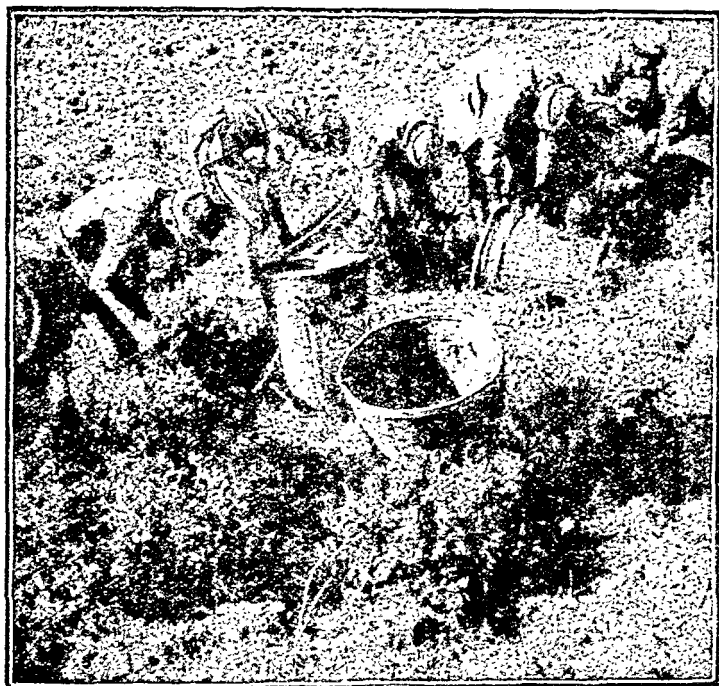
development Caster seed is also important because the eri silk-worms are reared on its leaf It is sown in the beginning of the Monsoon rains and harvested from January to February

Economically, the export trade in oil seeds is very harmful as their export not only robs us of oil but also of the cake which is so necessarily required for cattle and manuring and consequently ways and means should be sought to put an end to their export

(iv) *Tea* flourishes most in warm, moderately damp and fairly equable climates The tea plant requires constant shower of rains but does not like to remain in water for long and, therefore, well-drained hilly slopes are the best sites for its cultivation. It is chiefly cultivated in Assam, Bengal, Nilgiri Hills, Kangra Valley and Dehradun India is a serious rival to China in tea production and had ousted Chinese tea from the English and European markets The consumption, export and production in India have greatly increased due to the keen interest and efforts of the Indian Tea Association The tea industry is mostly in the hands of Europeans

(v) *Coffee* It requires moderately mild climate, heavy rainfall and well-drained slopy hills Its cultivation is mainly confined to Mysore, Coorg, Travancore, and some parts of Madras It is sown and transplanted in the rainy season After three years of its transplantation, the plant bears fruits and ripe ones are collected from October to January every succeeding year After going through many manufacturing processes—pulping, fermenting, drying, milling and winnowing, etc—coffee is prepared out of these ripe fruits But owing to the keen competition with the cheap Brazilian coffee, the Indian coffee industry has been hit very hard Areas once growing coffee are now planted with tea shrubs

(vi) *Indigo* It is chiefly cultivated in Madras, Bihar and Orissa, the United Provinces and Bombay India has been growing indigo from very ancient times and for many decades in the nineteenth century India led the van of indigo trade in the world market But the introduction of synthetic indigo in 1897 almost proved fatal to our indigo industry from the effects of which it is not



Collection of Tea leaves

yet fully recovered. Now-a-days Bihar is the most important from the point of foreign trade and it is here that the dye is systematically extracted and marked under European supervision. The bulk of indigo produced in Bihar factories is exported from Calcutta.

(vii) *Tobacco* flourishes in those areas where the soil is most alluvial, and well-drained. The chief provinces noted for tobacco cultivation are Bengal, Burma, Bihar, the United Provinces, the Punjab, Bombay, Madras and Central India. Half the recorded area under tobacco is in Bengal, but the province takes no share in the higher grade manufacture. The greater part of tobacco grown in India is intended for *hukka* smoking and is coarse and heavy in flavour. But recently there have been some important developments in the production of superior type of tobacco for commercial purposes. Madras and Bihar are showing great improvement in the manufacture of cigars.

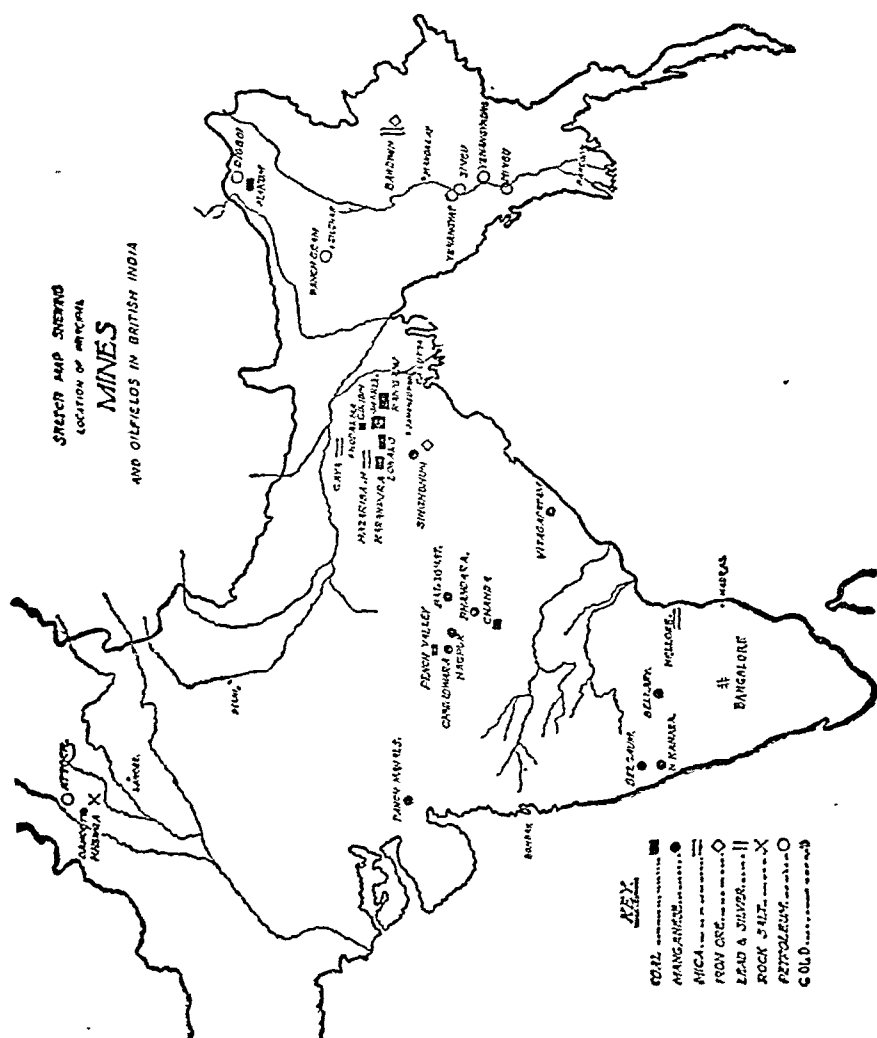
(viii) *Opium*. At one time it was a very flourishing industry of India and was cultivated widely in Bihar, the United Provinces, and many native States such as Indore, Gwalior, Bhopal, Mewar and Baroda. But the area under this crop has been considerably reduced owing to the stoppage of opium export to China. In recent years its internal consumption has been also controlled and discouraged. At the present day the cultivation of poppy is mainly confined to Bihar and some eastern districts of the United Provinces.

(ix) *Cinchona*. It flourishes most in cool climates and is mainly cultivated in Darjeeling and the Nilgiri Hills on slopes with plentiful supply of water. Quinine is produced from cinchona which is largely used in preventing and curing malarial fever. It is a government monopoly.

2. Mineral Products

It has now been definitely ascertained that the mineral potentialities of India are quite sufficient to maintain most of her 'key' industries. "The feature that stands out most prominently in a survey of the mineral resources of India is the fact that while striking progress has been made in recent years in opening out deposits from which

owners are compelled to have recourse to the South African coal or coal imported from Germany and England. If improved and economical means are devised in mining it is expected that India will easily meet her growing demand for coal. The total output is near about 36 million tons valued at Rs. 10 crores. Railways alone consume



about 34 per cent. of the total production. The rapid increase of production of coal flooded the inland markets

and caused a serious depression in the coal industry. The government met the situation by levying a protection duty on imported coal and by adopting measures to recapture the overseas markets. To popularize soft coke as a domestic fuel, the Indian Soft Coke Cess Committee was appointed.

(ii) *Iron* The indigenous iron industry has been in a flourishing condition from ancient times and was carried on in different parts of the country. Iron ore is found in many provinces of India but by far the richest and most important of the iron deposits are those that occur in the 'Iron Belt' of Singhbhum and the Keonjhar, Bonaigarh and Mayurbhanj States of Orissa, which contain 'a range of iron ore running almost continuously for forty miles'. The tracts are estimated to contain no less than 2,800,000,000 tons of ore.

Early attempts to establish a successful iron and steel industry on the European model proved abortive. The first successful concern may be said to date when in 1874, the Barakar Iron Works started their operations on the Jherria coal fields. Later on in 1914, J. N. Tata the giant industrialist of India, inaugurated the Tata Iron and Steel Company at Sakchi. Steel was first manufactured in India by the Tata Iron and Steel Company. The war gave stimulus to the industry, though it had to face after the termination of the war a fierce competition from the imported steel coming in the Indian market at very cheap rates. The proximity of coal fields and iron deposits in Bihar and Orissa is of an inestimable advantage for the successful working of the iron and steel industries of India as this is enjoyed by very few countries in the world. For the rapid and successful industrialization of the country the development of iron industry is an indispensable factor.

(iii) *Petroleum* There are two distinct oil-bearing areas in India on either side of the Himalayan arc, the one on the east, and by far the most important, includes Assam and Burma and the islands of the Arakan coast, contributing 95 per cent of the total output, the other on the west includes the Punjab and Baluchistan. The most successful oil-fields are found in the Irrawady

Valley in Burma, from which nine-tenths of the indigenous petroleum is obtained. It is also believed that the Burma oil-fields are on the point of exhaustion. India has to import every year huge quantities of kerosene oil especially from Russia and the United States in spite of the marked increase in its production.

(iv) *Gold*. Almost the whole of the Indian output of gold comes from the Kolar Gold Fields in Mysore. It is also produced at Hutti in Hyderabad State, in the Dharwar district of Bombay and the Anantapur fields of Madras. The output of the Kolar Gold Fields is on the decline. It is estimated to be 3 lakhs fine ounces of gold.

(v) *Manganese* is a very valuable mineral which is required largely by steel and glass manufacturers. The industry dates from 1892 when quarrying began in Vizagapatam in the Madras Presidency. In 1900-1901 the rich deposits in the Central Provinces were quarried, which now yield a large quantity of ore than the Vizagapatam mines. The most important deposits occur in Bihar and Orissa, Bombay, the Central Provinces, Madras and Mysore. India now ranks second in the list of manganese ore producing countries, but a major portion of it is exported to outside countries.

(vi) *Mica*. It is found in Bihar and Hazaribagh, Monghyr and Gaya, in the Nellore districts of the Madras Presidency and in Ajmer-Merwara and other States of Rajputana. India has for many years been the leading producer of mica with an output of more than three-fifths of the world's total. It is put to diverse uses and is mainly used in the electric industry as an insulating medium. With the development of this industry the demand for mica has also increased. India exports it mainly to the United States and the United Kingdom.

(vii) *Saltpetre*. At one time India possessed a practical monopoly in the supply of saltpetre which is so important in the manufacture of explosives and chemical manure, but now its production is on the decline owing to the discovery of large deposits of sodium nitrate in Chile in South America.

(viii) *Zinc* The most important deposit of zinc ore is that of Bawdwin in the Shan States of Burma. Although zinc ores have received but very little attention in India for the past fifty years, there are many prospects of India's becoming an important producer of zinc ores. The Bawdwin deposits are very rich and if fully worked, India will not only supply her own demand but large amount of zinc will be available for export.

(ix) *Salt* The consumption of salt is gradually increasing in India and is now about 17,11,348 tons a year. It is obtained by three important methods in India. About 60 per cent of the total output is obtained by evaporation of sea water on coasts of Bombay, Madras and Burma. Another source of salt is the Sambhar Lake in Rajputana. The third source of salt is the Salt Range and the Kohat mines in the Punjab, which are believed to be very rich and practically inexhaustible. Its manufacture is solely in the hands of the Government of India, though private companies are allowed to manufacture it on certain terms and conditions.

The other mineral products exploited on a commercial basis are tin, copper, chromite, lead, silver, aluminium, nickel, gypsum, potash, gem stones, rubies, diamonds, wolfram and sulphur, amongst which some are very important for the development of metallurgical and chemical industries.

3 Forests

The forest vegetation of a country is largely dependent upon rainfall and elevation, where the temperature is high and rainfall abundant, evergreen forests are found, but in proportion as either of these conditions is wanting they become scanty and stunted. It is for these reasons that tropical countries with great heat and extreme moisture are covered with dense forests.

India is not unfavourably situated as regards the abundance and variety of her natural forests which cover more than 22,600 square miles in area. Broadly speaking, the following main types of forests may be distinguished.

(i) *Evergreen Forests* These occur in regions of very heavy rainfall, such as on the slopes of the Western

Ghats, the Eastern Sub-Himalayan tract and the coast districts of Burma and Chittagong and are characterized by the great variety and luxuriance of their vegetation.

(ii) *The Deciduous Forests*, in which most of the trees are leafless for a portion of the year, occupy the large areas of the Sub-Himalayan tract, the Peninsula and Burma comprising considerable teak and sal trees.

(iii) *Hill Forests*. In these forests the vegetation varies considerably according to elevation and rainfall. In the north-western Himalayas the chief timber tree is the deodar which occurs most commonly at an elevation of 6,000 to 8,000 feet, and in association with oaks or blue pine towards its upper limit the deodar merges into very large areas of spruce and silver fir while below it are found extensive forests of the long-needed pine which is tapped for resin. On the eastern Himalayas in Assam and Burma the hill forests possess oak, magnolias, while Assam and Burma are covered in the dense Khasia pine at the elevation of 3,000 to 7,000 feet.

(iv) *Arid-country Forests*. They are mostly found in Sind, Rajputana, Baluchistan and the south of the Punjab. The number of species is few and the produce is insignificant. The only important tree of these dry tracts is *babul*.

(v) *Littoral or Tidal Forests* occur on the sea coasts and along tidal creeks. The important trees are the mangrove or the sundries.

Utility of Forests

Undoubtedly, the importance of forests in the economy of an agricultural country like India can hardly be exaggerated where the benefits derived from them are so manifold. They exercise a tremendous influence on economic conditions both directly and indirectly.

Indirectly, forest trees transpire enormous quantities of moisture which reduces the temperature of the atmosphere in hot climates thus producing an effect of equalizing temperature. They have been also called regulators of rainfall, because by reducing the temperature of air they cause condensation. They act as a storage of rain water in the soil and raise the sub-soil water level of

the earth and produce a more constant feeding of springs and rivers in the summer season. They, by regulating the courses of rivers prevent flooding of water, erosion of the soil and denudation of rocks. They supply rich leaf mould which fertilizes the soil, and forms one of the cheapest manures available for the former in the vicinity of forests. They reduce the velocity of air currents and protect the adjoining fields against cold and dry winds. In short, 'Forests are national assets and civilization is in urgent need of them. Not only do they provide supplies of timber, produce other raw materials and incidentally give a revenue to the State, but their indirect advantages are even more important.'

The direct advantages of forests are very valuable inasmuch as they supply us a number of valuable forest products such as timbers, fibres, grasses, drugs, spices, rubber, bamboos, dyes and tans upon which depend the successful working of so many manufacturing industries of India. They supply grazing grounds for cattle.

India possesses an inexhaustible forest wealth and if necessary amount of knowledge and enterprise, capital and other requisites of production are available, there are chances of India's becoming a leading industrial country in her manufactured forest products. The extensive reservoir of timbers and grasses can be successfully exploited by starting of resin, rubber, match, turpentine and catechu industries. It is because of these incalculable advantageous services that every civilized State has taken special measures for the preservation, protection and artificial growth of forests. The income derived from these forests by Government is near about two crores of rupees and in view of the vast area under forests the amount is inadequate. Germany with a smaller forest area earns more than 20 times than India.

Classification and Administration of Forests

The extensive forests in India are owned and managed by the State and for administrative purposes they have been classified into three distinct divisions—*reserved*, *protected*, and *unclassified*, according to the degree of control exercised by the State on forests.

The reserved forests are solely under the control of the Government and are intended to be maintained permanently on climatic and physical grounds or for the supply of valuable timbers for commercial purposes. "In the case of protected forests, the local government has power to close a portion for a limited period, to reserve particular trees, or classes of trees, and to prohibit or regulate the removal of forest produce, the clearing of land, and the pasturing of cattle. The protected forest may be either in a state of transition to reserves, or intended to remain permanently in the second class." The only difference between the two classes of forests is that in the protected forests the control is not so stringent as in the reserved forests. In the case of unclassed forests, there are very few restrictions for the use of the public. There are about 2,500 species of trees of which the most important and valuable is teak.

In order to put a stop to the reckless destruction of forests and for their proper maintenance, conservation and better utilization, the Government have instituted the Forest Department. The Inspector-General of Forests is the Head of the Forest Department and is the technical adviser to the Government of India in matters relating to forest. The main functions of the department are to conserve, replant the forest trees and to improve their yielding capacity and to demonstrate their commercial value for industrial exploitation. For the promotion of research work a Forest Research Institute was established in 1906, and as a result of its efforts many valuable investigations have been undertaken and steady progress is being registered in scientific and practical knowledge which should ultimately lead to the fuller and better utilization of the raw products yielded by Indian forests. There are five main branches of research namely Silviculture, Forest Botany, Forest Economic Products, Entomology and Chemistry, each branch being in charge of a research officer. One of the most important results of research has been to demonstrate that bamboo can be utilized for the manufacture of paper pulp, in addition to grasses like *Sabai* and *Bhabar* which have already been exploited in many paper mills of India. Improvement in the means of transport and communication,

together with the proper afforestation and silviculture schemes, will go a long way in increasing the potentialities of forests of India and will help the development of many forest industries which are yet very backward and mostly in a semi developed state

SOURCES OF POWER

From times immemorial man has felt the indispensableness of pressing into his service some external power, in order to assist him in the production of wealth. Although human power has been used from the very infancy of creation, it is very limited, nay ridiculously insignificant to operate heavy implements and, therefore, the muscular energy of cattle was sought in its stead.

India, being an agricultural country has been using cattle power for drawing ploughs and carts, crushing cane and seeds, lifting water from wells, and threshing grain for centuries unknown. The entire agricultural operations in the country, are being carried on by draught cattle and practically no motive power is employed. Hence the importance of cattle power in India is beyond question and any improvement in the quality of animals will surely increase the efficiency of agriculture. As the productive operations in the industrial economy become heavier and more complicated, the necessity of using some motive power or energy obtained from nature becomes more imperative. By power we mean any mechanical energy which helps in propelling engines and machinery.

One of the essential conditions of the successful industrial development is the provision of cheap motive power. Today, the success of manufacturing industries in any country is largely governed by the cheap availability of natural resources for generating energy. In spite of the disadvantage in not having even distribution of different sources of power, India is capable of generating sufficient amount of energy for her present needs. The principal sources of power available in India are coal, wood fuel, oil, wind and water.

(1) *Coal* is still the most important source of power in India and extensively utilized for generating steam. Most

of the manufacturing industries in India are worked by steam and practically the whole of our railways are driven by steam-engines. Coal has one great drawback in India as a source of power. Owing to its concentration in the Gondwana coal-fields the transporting charges to the big industrial centres in the far-off provinces are very high with this consequence that they increase the cost of production of the finished commodities to a considerable degree. The Indian coal can be used cheaply and conveniently only by the Bengal jute and the Bihar iron and steel industries which are in the vicinity of coal mines.

(2) *Wood-fuel* can also be utilized to generate energy but owing to many extravagant methods involved in its operation, it is not much availed of. As the forests are easily exhaustible unless they are re-afforested on a comprehensive scale, it is not expedient to utilize them for this purpose because it will result in a reckless destruction ultimately detrimental to the better interests of the country in a variety of ways.

(3) *Oil*. For driving light machines like oil-engines, motor-cars, and buses, oil is a very important source of power. The most successful oil-fields are nearing their exhaustion and, therefore, the need of careful economy in their exploitation has been insisted upon. Hence, it is not a promising source of power and much reliance cannot be placed on it.

(4) *Wind-power*. This power is very helpful to the agriculturists in the winnowing of crops, such as wheat, barley, rice, millets, pulses, oil-seeds etc. cultivators usually stand on stools and drop the thrashed crop from the above when the corn and chaff are separated, the latter being taken away at some distance by the force of the wind. It is also used for lifting water. It can be advantageously employed in mills with smaller wheels and lighter machines. The chief defects with the wind-power are that it is periodic and uncertain nor can it drive the heavy machinery. The value of wind-power in India is very small, because of the lightness of the prevailing winds except along the sea-coast and on the Deccan uplands.

(5) *Water-power*. The limited supplies of coal, wood

and oil fuel and the world's increasing demand for them necessitated people to discover the possibilities of utilizing water for the generation of electricity as a cheap and efficient source of energy. The discovery of hydro electricity opened up a new vista and has brought about an unprecedented change in the structure of the industrial society. India promises to be one of the leading countries of the world in regard to the development of hydro electric power and a great push forward has been given to the development of hydro electric projects in our country. The crying need of India is the provision of cheap and efficient power which is the keynote of successful industrial development. Our country is gifted with vast potentialities of water power and its transmission by electricity offers good opportunities for supplying larger quantities of power at cheaper rates in all parts of India.

Hydro Electric Schemes in India

Mysore Installation This hydro electric scheme was inaugurated on the Cauvery river, in Mysore State at Sivasamudram in 1902 with the main object of supplying power to the Kolar gold fields. Electricity generated at Sivasamudram is transmitted 92 miles to the gold fields at Kolar. It was for a long time the longest electrical power transmission line in the world. Current is also sent to Bangalore, 59 miles away, where it is used both for industrial and lighting purposes.

Kashmir Project Subsequently, the Kashmir Durbar utilized the Jhelum river by installing a plant near Baramulla, which is capable of generating 20,000 units of electrical horse power. The power is used by the Silk Factory for moving the machinery and heating purpose. The greater part of Srinagar city is electrically lighted and the demand for power is constantly on the increase.

Tata Hydro electric Schemes The greatest water-power undertakings in India are, however, the Tata hydro electric schemes on the Western Ghats, recently brought to fruition for the supply of power in the city of Bombay. They mark a big step forward in the industrial development of India. The first scheme was started in 1915 in the neighbourhood of Lonavla above the Bhor

ELECTRO-CULTURE



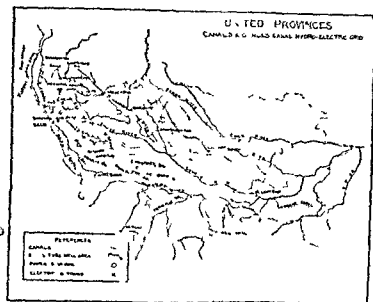
Electrifying cattle feed with the hope that there
will be a greater yield of milk

Ghat. "The rainfall is stored in three lakes at Lonavla, Walwham and Shirawta, whence it is conveyed in masonry canals to the fore bay or receiving reservoir. The power-house is at Khopoli, at the foot of the Ghats, whither the stored water is conveyed through pipes, the fall being one of 1,725 feet. In falling from this height the water develops a pressure of 750 lbs. per square inch and with this force drives the turbines or water-wheels." Originally, the scheme contemplated to generate only 30,000 electrical horse-power, but the increasing demand necessitated an extension of Shirawta dam, which increased the capacity to more than 40,000 horse-power.

Another scheme, called the Andhra Valley Scheme is calculated to generate 1,00,000 horse-power which will be consumed by Tramway Company, and also by the Harbour Branch and Bombay-Kalyan section of the G. I. P. Railway for the first stage of their electrification scheme. A third project under the name of the Nila-Mula Scheme is now complete. After damming the valleys of the Nila and the Mula rivers a big lake having an area of sixteen square miles has been formed at Mulshi, out of which water is made to fall from a height of 1,750 feet at Bhira power-house. It is calculated to supply 150,000 electrical horse-power which will be absorbed by mills, factories and local areas not yet electrified in Bombay and suburbs as well as by the B. B. & C. I. and the G. I. P. Railways. Another big project is contemplated by Messrs. Tata in the huge valley of the Koyna river which is calculated to generate 350,000 horse-power for developing electro-chemical industries near the power installation. When fully utilized and in complete working order, the hydro-electricity will not only remove the great handicap of dear power from which Bombay has hitherto been subject to, but will bring an appreciable saving in industrial cost and a considerable economy of fuel, and also improve the general tone of the public health by the conspicuous absence of dirt, soot and smoke—the dear associates of coal and oil.

The Ganges Canal Hydro-electric Schemes. Recent investigations have evinced fair prospects for the development of water-power in the United Provinces and the

Ganges Canal Hydro electric Project has been undertaken to supply cheap power for lighting and industrial purposes by means of the 'grid system' Apart from employing



the Ganges canal for irrigating the land, it has been further utilized in generating electric power for lighting, industrial and agricultural purposes. On the canal about ten falls have been considered suitable for generating electricity, out of which six have been already developed and are supplying more than 15,000 kilowatts of electrical power. The important power stations are Bhira, Sumera, Bahadurabad, Palra, Chitaura and Mohammadpur. The proposed schemes likely to be completed by the year 1941 have a potential generating capacity of over 2,800 kilowatts. The electric power is conveyed by overhead lines to all the big towns in the districts of Saharanpur, Muzaffarnagar, Meerut, Bijnore, Moradabad, Bulandshahr, Aligarh, Nagina, Hathras, Badaun, Etah, Muttra and Agra.

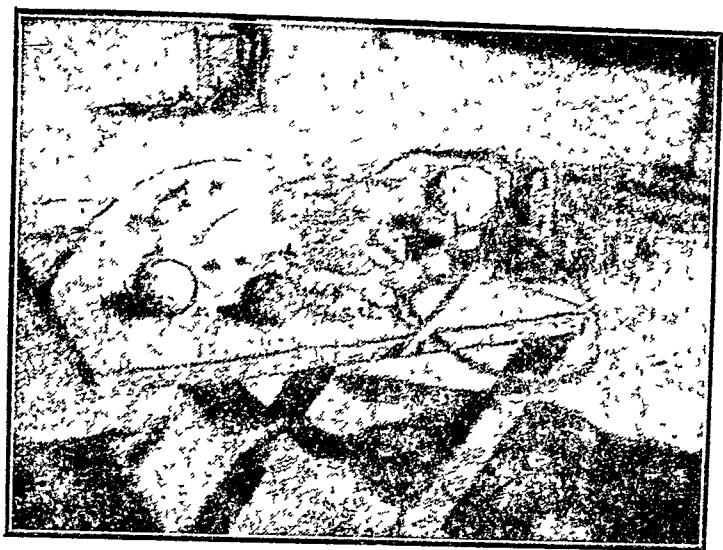
State tube-wells have been constructed for ensuring a regular supply of water to agriculturists in those areas which hitherto suffered from the shortage of artificial

means of irrigation. It has been planned to construct about 474 tube-wells in the district of Moradabad, 237 in Meerut and Bulandshahr, 107 in Bijnore and about 400 in Badaun. The Grid electricity, besides being useful and convenient to cultivators in their agricultural operations as a cheap source of power, has also greatly helped the development of minor industries as it is now transmitted to about 100 towns of the districts mentioned above.

§ *The Mandi Project in the Punjab.* The Mandi Project utilizes the snow-fed waters of the Uhl river, a tributary of the Beas, which joins the latter in Mandi State about five miles east of Mandi town. The scheme has been formulated in three stages. The first stage of the project, which is now complete, will generate 48,000 horse-power which will be supplied to Lyallpur and Ferozpur. In the second stage, by the construction of a dam the electrical output would be doubled. In the last stage an additional amount of 64,000 horse-power will be generated and the transmission of power will be extended to Saharanpur, etc.

Madras also offers many favourable sites for hydro-electric projects; of these one on the Pykara river in the Nilgris known as the Pykara Hydro-electric Scheme was completed in 1932 by the Madras Government. The Mettur Hydro-electric Scheme which was recently completed by the Madras Government provides electrical energy to many important cities in Madras Presidency. Assam has sufficient power for supplying the needs of its tea industries. In Bihar and Orissa and the Central Provinces there are only moderate possibilities of development. Bengal has large water-power in its Himalayan area.

Although so much progress has been made a very small fraction of the country's water-power is, at present, being utilized. The estimates show that only two per cent. of her water-power is used while the rest is still running to waste. The one great difficulty that we have to encounter in the generation of power in India is *the initial heavy cost of installation owing to the seasonal character of rainfall*. Means have been devised to cheapen the cost. The hydro-electric schemes have been combined with important irrigation projects, "the water being first



Electro-culture of fruits

of many of their difficulties, specially in connection with labour supply and housing.

It is also increasingly realized that cheap fares in consequence of cheap power on the electrified suburban railways and tramways for the removal of the surplus population from the congested cities will bring a real social gain in the shape of the improved health of the people. The cities of today enveloped in thick and foul smoke, overladen with soot and dust and surrounded with stifling atmosphere will be a thing of the past with the gradual adoption of the hydro-electric power.

Animal Resources

India abounds in a large variety of wild and domestic animals. The extensive forests of India shelter multifarious wild animals and numerous species of birds providing an excellent game for hunters and fowlers. The domestic animals are an indispensable factor in the agricultural economy of India. The bullocks and the male buffaloes are the most important for agricultural purposes ranging from the ploughing of the field to the threshing of the corn. The cow and the she-buffalo are mainly prized as supplying milk and dairy products which are necessary food articles in a vegetarian diet. Goat and sheep provide us with milk, mutton and wool. Horses, ponies, donkeys, camels and elephants are useful animals of burden and are considerably used in different parts of India. Other important by-products of animals are tusks, bristles, horns, fat and bones which are of great economic value.

The following table will show the population of livestock in British India and Native States.

British India in lakhs		Native States in lakhs
Cows, bulls and buffaloes ...	1520	1410
Sheep and goats	350	280
Horses, donkeys and mules ...	30	10
Camels	2	5
Total	1902	1705

Looking over the above figures, it is not difficult to find out that our cattle supply per 100 acres of land is very high as compared to other countries, while in terms of the population of this country our live stock is 74 per 100 people as compared to 500 of United Kingdom, 160 of Australia and 490 of Uruguay, but it must be admitted that our stock of domestic animals is slowly deteriorating to the great detriment of the agricultural industry in India. Diminished grounds for grazing, insufficient fodder crops, slaughter of prime cows and absence of facilities for better breeding and cattle rearing have jointly and separately brought about this undesirable state of our cattle. It is an imperative necessity not only in the interests of the agricultural industry but also of the people of the country that the above noted defects should be removed to improve the quality of the cattle. This matter is now receiving the attention of the Imperial Council of Research. The present Viceroy of India is taking a very keen interest in improving the quality of the breed of cattle and to solve the problem of milk supply in the country.

Pisciculture

Of the aquatic products fish forms an important food product especially in provinces like Bengal, Bihar and Orissa, Assam, Burma and the coast strips of the Peninsula, where "it supplies the people with the nitrogenous elements in their diet, elsewhere obtained by the use of pulses". But the fisheries of India in spite of their potential resources as yet yield a mere fraction on what they could if they were exploited on scientific basis. The chief distinguishing feature of our fishing industry is that it is regarded as a low occupation and universally relegated to low-caste people who are extremely averse from changing their primitive methods of catching the fish owing to their want of education, lack of capital and extreme conservatism. As the fish provides us a delicious type of food, an organised exploitation of the enormous resources is absolutely necessary along modern scientific methods.

The Madras Government was first to take the initiative and set up a distinct Fisheries Department whose

activities have greatly expanded since its inception. The main efforts of the Government are directed towards improving the professional knowledge of the sea-going fishermen. Fish-curing is practised extensively everywhere on the Madras coast and the development of this industry is due primarily to the sincere efforts of the Department of Fisheries. In Bihar and Orissa fishing is extensively practised in small rivulets, estuaries of rivers and swamps. Bengal is enormously rich in fishery wealth and in every tank or *Jheel* of the village fish is regularly reared. It is a necessary item in the diet of about 80 per cent. of the people living in Bengal. Calcutta alone consumes over 4 lakhs maunds annually. In this undeveloped state of fisheries when they are most crudely exploited about 9 lakhs of people are engaged in catching and selling fish in Bengal. The Bengal Fisheries Department is making some efforts to improve the propagation of fish and the lot of fishermen with a view to free them from the oppression of the mahajans (fish contractors and middlemen) by organizing them into a number of fishermen's co-operative societies.

If Bengal's fisheries are mainly confined to inland waters, those of the Bombay Presidency excepting Sind where fish is abundantly found in inland waters, are mainly found on the coast line of the sea. In Burma the fisheries being the monopoly of the Government yield a large amount of revenue to the province and therefore they are regarded by some as one of the most important sources of national wealth.

High-class capitalists have always fought shy of mixing with the low-caste fishermen to assist in the development of the Indian fisheries. The present condition of the industry is such that the initiative to uplift and educate the fishing community and to introduce the modern improvements in the industry, must be taken by the Government.

CHAPTER VII

LABOUR

What Labour Means ?

Labour, in Economics, includes all human effort, of body or mind, which is directed to the production of wealth. Jevons has thus defined it, "Labour is effort, bodily or mental, put forth by human beings, not exclusively for the sake of the pleasure immediately associated therewith but partly or wholly, with a view to the attainment of some ulterior object."

According to this definition, only human exertion is labour which is undergone with the object of creating something or rendering some service measurable in terms of money, whereas the work done by animals such as horses, camels, etc., is not classed as labour in Economics. All those exertions which are undertaken by men merely for the sake of amusement and pleasure such as in singing, swimming, playing and walking are not regarded as labour in spite of their casual or ancillary advantages.

In Economics, only those exertions which are undergone with the object of getting some remuneration and which must result in the creation of wealth are termed as labour. A son who serves his father out of his parental affection cannot be called a labourer and as such his services cannot be classed as labour. A tourist who climbs a mountain simply to enjoy its beautiful landscapes is not a labourer, but the guide who climbs in the expectation of some reward is a labourer. If we are to classify any exertion as labour we should see whether it results in the creation of wealth in a form which may be utilized to satisfy some human want. Accordingly, the labour of a thief, a gambler, a swindler, a mendicant cannot become economic for all these groups of persons.

simply try to get things away from others, without adding any utility to them.

The work put forth by persons is of very different kinds; unskilled labour requires more of physical strength and is mainly mechanical while skilled labour is that which requires the use of mental faculties of intelligence, discrimination and judgment. In some professions both kinds of labour is required, though the predominance of the one may be quite apparent. The labour of domestic servants, peons, ordinary labourers employed for digging earth or engaged in other professions requiring no skill is unskilled, while that of doctors, lawyers, engineers, accountants, carpenters, etc., is skilled, because the latter have undergone a course of special training for doing their work.

The word labour is often used to denote the labourers themselves, and no ambiguity is felt in using the term 'labour' for the term 'labourers' because labour is inseparable from the labourer. We often hear people speaking that labour is cheap or dear meaning thereby that labourers are cheap or dear.

Productive and Unproductive Labour

There has been much controversy among the economists over these two forms of productive and unproductive labour. For instance, one of the earlier groups of French economists or, physiocrats, as they are called, believed that only that kind of labour is productive which is devoted to the production of agricultural crops and minerals. Adam Smith and John Stuart Mill believed all those efforts to be productive which are embodied in material objects and as such they regarded the labour of the public officials and professional men, whose efforts do not contribute any tangible results, as unproductive. Smith defined unproductive labour in the following words: "All works which perish in the very instance of their performance and seldom leave any trace or value behind them, for which an equal quantity of service could afterwards be procured, are unproductive works." Their main contention was that the labour of domestic servants, lawyers, judges, policemen, actors, teachers, etc., did not

result in the creation of fresh wealth and as such their labour was called unproductive

But the modern economists do not draw any such arbitrary line between these two forms of labour. According to our definition any kind of labour which produces economic utility irrespective of its forms is a productive labour. "Broadly," says Chapman, "all is productive labour, which yields, or is intended to yield, something of value, it embraces all services which we are prepared to pay for." Only that labour is unproductive which fails to produce any utility. Again to quote the same learned writer, if a company started to cut a canal but was afterwards compelled to desist because the project was not feasible, the labour already expended would be as unproductive. Secondly, the labour of thieves and dacoits, swindlers and pickpockets, pirates etc., is also called unproductive because their labour does not result in the creation of *new* wealth, but it is solely directed towards misappropriation of wealth produced already by the members of the community.

Malthusian Doctrine of Population

Towards the end of the eighteenth century Malthus, the famous English scholar of History and Political Economy, propounded his doctrine of population which although true in essentials is subject to criticism. He was induced to formulate this theory because in consequence of the Napoleonic wars and the gradual emergence of Industrial Revolution when everything was in a topsyturvy state—unemployment and poverty being rampant—he believed that great and unconquerable difficulties lie in the way of further improvement of society owing to the power of population to increase at a much faster rate than the power of earth to produce food for man. Malthus, in the second edition of his "An Essay on the Principles of Population" laid down the three following propositions with regard to the growth of population:

- 1 "There is a tendency of population to increase faster than the means of subsistence." After regarding carefully the economic condition of the different countries he writes that "every people of whose history we have a trustworthy record has been so prolific that the growth

of its numbers would have been rapid and continuous if it had not been checked either by a scarcity of the necessities of life or by some other cause, that is, by disease, by war, by infanticide, or lastly, by voluntary restraint." He thought that population, when unchecked increases in geometrical progression *i. e.*, in the ratio of 1, 2, 4, 8, 16, 32, 64, 128 etc., and that the means of subsistence increase only in arithmetical progression, *i. e.*, in the ratio of 1, 2, 3, 4, 5, 6, 7, 8 etc. Population in all countries, he observed, tends to out-strip the means of subsistence.

2. "Population invariably increases when the means of subsistence increase, unless prevented by powerful and obvious checks." Certainly, if there is an increase in the food supply, then, with the existing standard of living that country can support a larger number of people than before.

3. "The checks which keep the population down to the level with the means of subsistence" are positive and preventive.

(i) *Positive checks* are those which owing to insufficient nourishment, inadequate clothing and improper housing increase the death-rate and immediately reduce the size of population, *e. g.*, infanticide, famines, diseases, cannibalism, starvation, war, etc.

(ii) *Preventive checks* are those which help in the diminution of birth-rate and ultimately reduce the number, *e. g.*, moral restraint such as postponement of marriage. He, by his personal observation, came to the conclusion that if population were allowed to grow unchecked nature will cut it down by positive checks and the fast growing population will perish miserably owing to epidemics and wars. He, therefore, fearing the frightful increase of population, urged people to exercise preventive checks as "the positive checks only excite new growth, just as the grass that is mown grows all the more rapidly afterwards." The most efficacious preventive check, according to Malthus, is moral restraint. By moral restraint Malthus meant restraint from marriage from prudential motives, with a conduct strictly moral during the period of this restraint.

Qualifications of the Malthusian Doctrine

History certainly has not confirmed the fears of Malthus. The Malthusian doctrine of population has been a subject of much serious and searching inquiry, but the laws enunciated by him still hold good with slight modifications. "The laws still remain intact, but the conclusions which he drew from them were unwarranted." His mathematical formula relating to the ratios of increase of population and that of food is no longer held good. From a study of the economic history of different countries after the Industrial Revolution since when the population has shown a tremendous increase, it is more than clear that countries which have shown a considerable increase in population have correspondingly increased in their wealth and prosperity and no shortage of food has been felt by most of them in spite of a large increase in population. In fact, Malthus at that period could not foresee the possibilities of gigantic improvements in the means of communication and transport as a result of which enormous food supplies can be transported from the areas of plenty to those of scarcity, and industrial countries can well afford to support a large population by producing manufacturing goods and exchanging them with the food materials of other countries. Today a country can afford to maintain a much larger population than its total production of food materials, provided it produces sufficient wealth in other forms for the satisfaction of its food requirements. The problem of today, as Moreland writes, "is no longer one of raising sufficient food to support the population of a particular country, but of producing sufficient wealth to provide by purchase the food that is required."

Again, with the social and economic advancement of a country and the improvement in the standard of living of its people, the birth rate or growth of population has shown a declining tendency. "Every advance of society, and particularly the spread of education, brings a greater insistence on a higher standard of living, and thus the size of the average family decreases as the average income increases." Thus, the law laid too much emphasis on the increase of population and Malthus could not take into

account those socio-economic considerations which tend to bring down the growth of population.

Malthus recommended moral restraint, i.e., the postponement of marriage, as a check against excessive growth of population of a country in proportion to its wealth production. But this method was considered impracticable for an effective check and therefore neo-Malthusian methods (which sanction the use of contraceptives and other artificial methods of birth-control) came to be recommended for adoption which are now too much prevalent in progressive countries.

The Malthusian law of population is operating to a certain extent in the case of India. With the establishment of peace and security guaranteed by the hand of a strong government, the population has shown a tremendous rise during half a century past in spite of all the vicissitudes of nature. In order to meet the growing needs of the increased population every effort has been made to increase the total food supply of the country by bringing more land under cultivation with better system of farming, irrigation, etc. But notwithstanding these attempts the population has outstripped the means of sustenance and a vast section of Indian population remains ill-fed and ill-clothed throughout the year. Diseases, a high rate of mortality, short longevity of life, feuds and strifes are some of the consequential results of ill-nourishment. The remedy lies in increasing the total wealth of India and in the adoption of preventive checks against an excessive growth of population.

Efficiency of Labour

Efficiency of labour denotes the capacity of a worker to produce relatively larger amount, or better kind of work or both in a given space of time. It must be reiterated that the efficiency of one factor depends on the efficiency of other factors with which it is combined in production. Efficiency of labour depends "partly on the employer and partly on the employed, partly on the organization and partly on individual effort, partly on the tools, machines, etc., with which the worker is supplied and partly on his own skill and industry in making use of them." Thus the subject of productiveness or efficiency of labour

resolves itself into two, what factors go to promote the personal efficiency of labourer? And, how does the improved organization of the employer contribute to the efficiency of labour? Let us first consider only those personal factors which affect the productive efficiency of labourers

Physical Strength. From the view point of production of material wealth, physical strength or 'physical vigour' which includes such qualities as muscular strength, a good constitution and energetic habits, is of extreme importance. People, who are endowed with a sound health, a good constitution and a longevity produce much more wealth than those whose length of life is shorter and subject to constant inroads of the erosive diseases. The efficiency of workers is influenced by their physical environment to a considerable degree. Racial characteristics are largely the heritage of climatic and physical conditions. Extremes of climate, whether too hot or too cold, are not conducive to hard work, a warm climate saps the vitality of the people and makes the application of sustained efforts well-nigh impossible while cooler climate in the temperate zone are believed to stimulate physical vigour enabling the people to put in more sustained labour. Besides these basic factors in determining the productive efficiency of a race, the standard of living of the worker and that of his parents and social customs greatly count in productiveness. Ill-nourished, ill trained, ill clothed and ill-housed children of overworked, weak, weary indigent and despondent parents are sure to prove inefficient workers in the long run. A proper supply of nutritious food prepared and taken in conformity with the economic and dietetic principles tends to increase the efficiency of the labourers. After food, sufficient clothing, adequate shelter, fresh air, healthy amusements and regular physical exercise are necessary factors in order to bring about labourers to an efficient state. A good rest is essential for the proper development of the productive capacities of work-people, as overwork of every kind brings weariness and lowers vitality and is greatly detrimental to the efficiency of the labouring classes. Intemperate habits should be eschewed as they are fatal to any serious

physical exertion. The sanitary conditions of the houses and the healthy environments of the workshops having all the possible amenities of life within their precincts wherein labour power works for a major portion of the day also tend to raise the industrial efficiency of the workers.

Intellectual Strength. Intellectual fitness in modern times is as essential as the physical fitness for the efficiency of labour and its importance relatively increases as that of the physical strength decreases with the introduction of machinery. Intellectual strength is largely the result of education—general and technical. General education imparted in the schools besides providing an elementary knowledge of many things 'affords the means of that wider intercourse which leads to breadth and elasticity of mind' even after the abandonment of school education. It develops imaginative faculties of men, quickens the faculties of observation, promotes clearness of mind, sharpens the faculties of discrimination and accurate judgment, engenders an optimistic view of life and enables them to grasp quickly and intelligently intricate problems arising in this work-a-day world. Good education of the worker is an indispensable factor in his efficiency as its direct and indirect results are highly beneficial to him. This intellectual equipment is largely the result of social advancement and the stage of civilization found within a community. The inefficiency of Indian labourers may largely be attributed to the want of education ; without a good system of education it is idle to expect any increase in the industrial efficiency. Technical education or training which is imparted by different technical institutions suited to the particular requirements of an occupation, has assumed a position of extreme importance in the modern industrial economy. It aims to give a full command over the difficult and delicate processes of machine production and imparts that artistic skill and knowledge which is extremely useful in a particular occupation. The absence of technical institutions and the lack of specialized ability required for the special branches of productive activities is a great handicap in the efficiency of Indian workmen.

Moral Strength Moral qualities such as honesty, punctuality, industry, self-respect and self-reliance, considerably promote the productivity of a labourer. Even if a labourer is properly equipped both physically and intellectually the amount of work that he performs depends on his will and the desire to work. If the worker possesses a good moral character, if he realises his responsibility in faithfully discharging his allotted task in a given space of time, and if he is not a shirker but works vigorously unmindful of the master's presence or absence, he is sure to prove himself as the most capable and efficient producer. The will power or moral strength may be considerably improved by a judicious combination of general and technical education of the workers. Marshall regards hopefulness, freedom and change as essential requisites for the moral strength.

Let us now answer the second question—“*How employers can contribute efficiency?*”

Efficient organization under modern methods of production counts a good deal in the maintenance and improvement of the industrial efficiency of the workers. Labour under imperfect organization and careless management would result in a relative waste. Each worker should be entrusted with a task best suited to his aptitude and training in order to secure maximum of results with the minimum of labour. The efficiency of different factors of production is interdependent and the way in which labour factor is combined with other factors of production in order to bring most fruitful results out of a certain fixed quantity of effort is the sole concern of the efficient organization. The delicate and costly machines should be assigned to the care of the skilled labour otherwise its productive efficiency would receive a serious setback if it is called upon to operate poor and out-of-date machines. By introducing several ‘welfare schemes’ inside and outside the workshop or the factory the enlightened employers and organizers try to stimulate the physical, mental and moral activities of their workpeople.

The Supply of Labour

A country's productivity depends ultimately upon the total availability of its labour force. But it is not merely

the numerical strength that constitutes the labour power of a country for, as is clear, a well-organized group of hundred labourers in a factory contributes its quota to production much more than a similar disorganized group wanting in those physical, mental and moral capacities which are found in the former group. Therefore, efficiency or productive capacity is another important factor which determines the volume of labour force in a country. That is why, in some countries a few number of efficient labourers produce large amounts of wealth with greater ease in the same or less time than countries with much larger populations can do. A third factor which also partly determines the supply of labour is the aggregate number of hours during which labourers are put to work. As a rule, if the labourers work for a larger period of time, provided that efficiency is not proportionately impaired by the long hours of work, their activity would result in a larger amount of produce than those who work for shorter hours.

Thus the main factors which determine the supply of labour in a particular country are the following :—

1. The number of labourers.
2. The quality or productive efficiency of labourers.
3. The number of their working hours.

The number of labourers depends upon the size of the population which in return is affected by (i) the birth-rate, (ii) the death-rate, (iii) immigration, and (iv) emigration. Obviously, if the number of birth exceeds the number of deaths at a certain period of time, the difference will constitute a natural increase in the supply of that country. The birth-rate in a country depend to a considerable degree upon its climatic conditions, upon the social customs and traditions, with regard to marriage, and upon the kind of standard of living commonly observed in that country. In India the birth-rate is exceptionally high owing to a hot climate, the social sanction for a married life at an early age, and a low standard of life met within the country. A high standard of living has a tendency to check off any abnormal increase in population.

Besides birth-rate, the death-rate is also an important factor in determining the size of the population in a

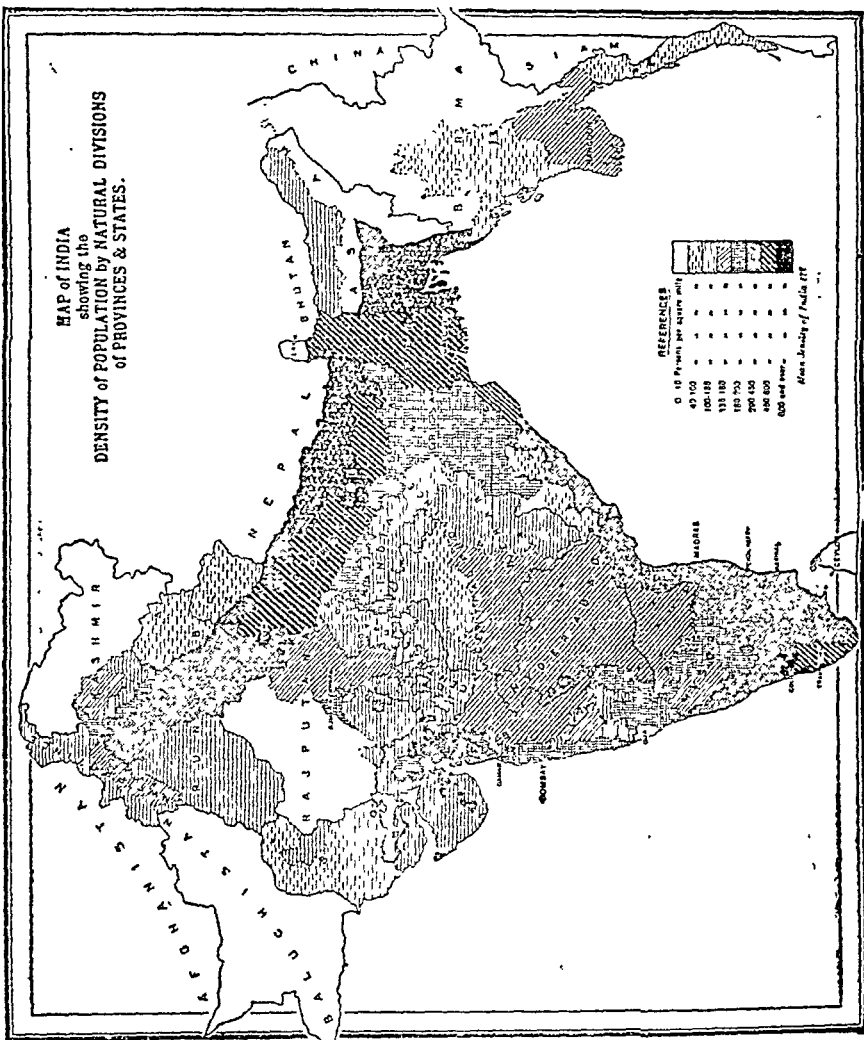
country If the death rate is high the growth of the population will be retarded On the contrary, the lower the death rate, the higher will be the tendency to an increase in population Generally amongst the economically backward classes due to lack of education and absence of other facilities to a healthy state of body and mind, the death-rate is high Early marriage also contributes to a high death rate because, children born out of immature parents are weaklings with a low power of resistance This is one of the important factors which speaks for the highest rate of infantile mortality in India Poverty also leads to a high rate of mortality for the poor cannot have a regular supply of nourishing food and facilities for healthy environments which are essential factors for a long and healthy life.

In order to find out the total number of workers in a country, it should be borne in mind, economists always consider the number of actual workers and exclude those children who have not entered their teens and the worn-out workers who are above fifty or sixty years (this process of exclusion and inclusion of persons assuming as unfit for labour is largely governed by the climatic and physical conditions of a country in question) because they owing to their dotage are scarcely expected to contribute any quota to the national income of the country Again, from the numbers so calculated, the number of the blind, the lame and emaciated bed ridden, diseased persons beyond any hope of recovery, who are incapable of putting any kind of work for the production of material wealth should also be deducted to possess an approximate idea of the working people in a country

Emigration diminishes supply of labour in a country whereas immigration into a country increases the supply of labour Thus, countries like Canada and Australia are at present gaining greatly in population by a large number of immigrants (that is, persons coming to live in a country) while recently some European countries, and notably Ireland have had their population reduced by emigration (that is by people leaving their countries to live in other sparsely populated lands) In India there is practically no immigration but on the contrary, over a

million Indian labourers who are comparatively unskilled and poor have emigrated to some of the new Colonies.

As has already been pointed out, efficiency counts much in the supply of labour. It depends upon the



manner in which labour is organized and directed. Experience tells us that if labour carefully looked after and intelligently organized and each labourer appointed for the task for which he is best fitted, its productivity will have

a tendency to appreciable improvements. The organization of labour on scientific lines is an indispensable factor of mass production.

A third factor, viz., the number of working hours, also bears an influence on the supply of labour in a country. The total volume of labour supply in a country can be increased to a certain extent by working long hours. But the consequences of such a sustained hard labour for a longer period of time are too detrimental in the long run from the point of view of national productivity. It is apt to undermine the health and efficiency of the workers. The tendency is otherwise now-a-days as some of the modern scientific studies in fatigue and technique of labour have demonstrated that shorter the number of hours the labourers work on their jobs suited to their temperament and training, the greater would be their output of wealth. Where labour is organized and directed on a short-period basis, the labourers work with greater interest and concentration so that within the limited space of time they can turn out a large amount of wealth-production and enjoy at the same time a greater amount of leisure and recreation for the development of their physical and intellectual faculties. Hence a resort to hard work for long hours in order to increase the total labour supply of a country is extremely problematical.

HUMAN FACTOR IN INDIA

The total population in India according to the latest census report of 1941 is 388,000,000 against 352,837,778 in 1931 and 318,942,480 in 1921. An increase of 10.2 per cent has been recorded in the census of 1941 over the previous census taken in 1931. About 76.3 per cent of these people live in British India and 23.7 per cent in Indian States which recorded a population of 92,973,000 in 1941. India is primarily a land of villages and tiny hamlets and there are about 7 lacs of villages in India. Of the total population about 90 per cent live in villages and about only 10 per cent in towns, the corresponding percentages in England being 21 and 79.

Factors Determining the Density of Population

The density of population (i.e., the number of persons

living per square mile) is determined by a variety of conditions discussed below.

(1) *Rainfall and Climate.* It is natural that the density of population must be high in a purely agricultural country like India, as elsewhere, where the facilities for earning a sustenance are goodly available. A sufficient quantity of rainfall and the presence of adequate artificial means of irrigation, considerably expedite the growth and prosperity of the population. And as there is very close relation between rainfall and agricultural productivity of wealth, therefore, density of population follows very largely the amount of rainfall. But it is a very vague generalization subject to many exceptions. It should be borne in mind that for the successful raising of crops a certain amount of rainfall is essential beyond which an additional quantity is useless and sometimes even detrimental. The other factor which is taken into consideration is the healthy climate of the locality. Thus in spite of the heavy rainfall that the Tarai tract receives, it is sparsely populated owing to the malarial climate of the place. Similarly in the upper part of Burma where rainfall is abundant population is very thin owing to the want of a healthy climate of the country and other requisite factors favourable for the cultivation of crops. The low density of population of Rajputana can be accounted for by the scantiness of rainfall. The well-watered regions of the Indo-Gangetic Plain extending from the Surma Valley right up to the Jhelum and the coast strips are the most thickly populated areas in India.

(2) *Configuration and Fertility of the Soil.* Physical configuration of the soil constitutes an important factor in the growth of the density of population, the best example of which is afforded by the Bengal Province. Thus in Eastern Bengal owing to the natural system of drainage the rainfall does not lead to water-logged areas, where the density of population rises as high as over 1,000 persons per square mile in some places, whereas, the density of population in Western Bengal possessing the same fertile soil and receiving an equally abundant rainfall is greatly affected owing to the want of a proper drainage system resulting in water-logging areas and

malarious climate. The level nature of the country where every inch of the land can be brought under cultivation can support a high density of population, but on the rocky and mountainous land where cultivation is difficult and precarious, population would be sparse.

(3) *Irrigation* In some tracts insufficient rainfall retards the growth of population but where the deficiency is made good by the artificial supply of water a high density of population can be maintained. An artificial and regulated supply of water through a splendid system of canals has brought about wonderful changes in the Punjab, where arid tracts are being transferred into most fertile ones. There are possibilities that Sind, hitherto one of the most sparsely populated provinces of India, will record in course of time a higher density of population due to the completion of Sukkar Barrage.

(4) *Transport* 'If cheap and rapid means of communication are available, population tends to move there, provided the place is otherwise attractive for purpose of production.' Many places such as the Central Provinces, Assam, etc., besides many other causes speak of the low density of population because of the absence of transport facilities.

(5) *Freedom from Enemies* Peace and security are apparently conducive to high density of population. Insecure tracts are characterized by a low density of population.

(6) *Industrial Development* Besides these factors, the stage of economic progress is also one of the main determinants of the density of population. An highly industrialised and commercialized country will permit a denser population than an agricultural one. The establishment of modern manufacturing industries attracts large number of labourers from the rural areas. Bombay, Calcutta, Nagpur, Jubbalpore, Jamshedpore, have grown populous in this way. The concentration of labour in the districts of Manbhum and Singhbhum in Orissa and Chota Nagpur in spite of the mountainous nature of the country is mainly due to the development of coal, iron and steel industries.

Density and Distribution of Population

The density of population per square mile is 226 in British India and 101 in the Native States. The mean density over the whole of India is 177 per square mile. India supports one-fifth of the world's total population.

The density of population in India is not the same in all parts of India ; it varies from province to province. The average density of the various provinces and the important Native States of India is as follows :—Bengal 650, Bihar and Orissa 458, United Provinces 451, North-West Frontier Province 380, Madras 328, Punjab 286, Bombay 218, Ajmer-Merwara 184, Central Provinces and Berar 160, Assam 152, Baroda State 266, Mysore State 210, Hyderabad State 152, and Central India and Gwalior 118.

As the country is purely agricultural, the density naturally differs according to the available means of subsistence which almost solely depend upon the suitability of the soil and precipitation for growing crops. The table given below will give an idea of the density of population in different countries of the world.

Belgium	..	654	Austria	..	199
England and Wales	..	649	France	..	184
The Netherlands	..	544	Spain	..	107
Germany	..	332	Egypt	..	34
Japan	..	215	United States	..	32

Growth of Population

The actual increase in the Indian population during the last fifty years has been much slower when compared with other civilized countries. The first regular census which was taken in 1872 recorded the total population of India to be 206 millions and since then the population has been steadily increasing in number.

The following tables illustrates the growth of population from decade to decade and show a comparative increase in the population of India according to Provinces.

A

Census of	Population	Percentage increase each decennial period
1872	206 162 360	
1881	252, 896 333	23 2
1891	287, 314 671	13 2
1901	294 361 006	2 5
1911	315, 156 396	7 1
1921	318 942 486	1 2
1931	352 837 778	10 6
1941	388 000 000	10 2

B

(In Thousands)

Provinces	1941	1931
1. Madras	4 93 42	4 67 40
2. Bombay	2 08 58	1 79 92
3. Bengal	6 03 14	5 01 14
4. U. P.	5 50 21	4 84 03
5. Punjab	2 84 19	2 35 80
6. Bihar	3 63 40	3 23 71
7. C. P. & Berar	1 68 22	1 55 07
8. Assam	1 02 05	86 22

Provinces	1941	1931
9. N. W. F. P.	30,38	24,25
10. Orissa	87,29	53,06
11. Sind	45,37	38,87
12. Ajmer-Merwara	5,84	5,60
13. Andamans	34	29
14. Baluchistan	5,02	4,63
15. Coorg	1,69	1,63
16. Delhi	9,17	6 36
Total of Provinces	29,58,27	27,15,26
States & Agencies	9,29,73	8,13,10
Grand Total	38,88,00	35,28,36

The actual rates of increase in the population has not been so rapid as it might seem to a reader from the figures given above. Allowance must be made for the additional area included in each census since the first and of greater accuracy in the methods of taking census. After making proper allowances for these factors the real increase of population has been recorded to be 20·1 per cent. during 1871-1921.

A comparison with other countries will give an idea that the rate of increase is not so rapid as it is found in other countries of the West. "Whereas the percentage increase of population between 1870 and 1921 was about 20 in India, it was 58·2 in England and Wales, 53·2 in Denmark, and 45 in Europe as a whole excluding Russia." The population of the United States during the period of 1881-1921 increased by 82·1 per cent. and that of Japan rose by 83 per cent. in 24 years from 1896 to 1920.

Among many causes which account for this low rate of increase of Indian population the important ones may be enumerated here. The effects of high birth rate in India which is about 35 per thousand per annum are largely nullified by a high death rate so that the survival rate in India is lower than in Europe where although, the birth-rate is much lower, the death rate is lower still. India being a tropical country is subject to all peculiar diseases such as malaria, small pox cholera, and "fever" under which are usually placed dysentery, pneumonia, phthisis, relapsing fever, etc. The terrible ravage of famines and the appalling low standard of living, in other words, the grinding poverty of masses are other main causes of high rate of mortality in India. Professor Banerjee states that the slow growth of population is due to several causes—famines epidemics, diseases, want of proper food and good drinking water, insanitary conditions and the impaired vitality caused by early marriage. In every decade we find a heavy toll of population being wiped away either by famines or the scourge of numerous fatal diseases.

Vocational Distribution of Population

The following percentages show the relative importance of the occupations from which the people of India derive their livelihood.

Total population 3528 lakhs

No.	Occupations	Total maintains in lakhs	Percentage of total Population
1	Agriculture, farm stock and forests	2348	67.1
2	Minerals	5	.2
3	Industry	342	10
4	Transport	53	1.5
5	Trade	183	5.1

No.	Occupations	Total maintains in lakhs	Percentage of total Population
6	Public force	17	·6
7	Public Administration ...	28	·6
8	Professions and liberal arts	59	1·5
9	Miscellaneous, domestic servants, unproductive occupations and insufficiently described occupations	494	13·4

Distribution of population according to occupations in important countries.

Country	Agriculture and Vegetables	Industry	Trade and Transport
India	67 per cent.	9·7 per cent.	6·9 per cent.
U. K.	11·6 "	56·8 "	13·4 "
France	40·7 "	35·2 "	9·9 "
Germany	29 "	42·2 "	13·4 "
U. S. A.	26·7 "	38·6 "	17·6 "
Italy	48 "	27 "	12·5 "

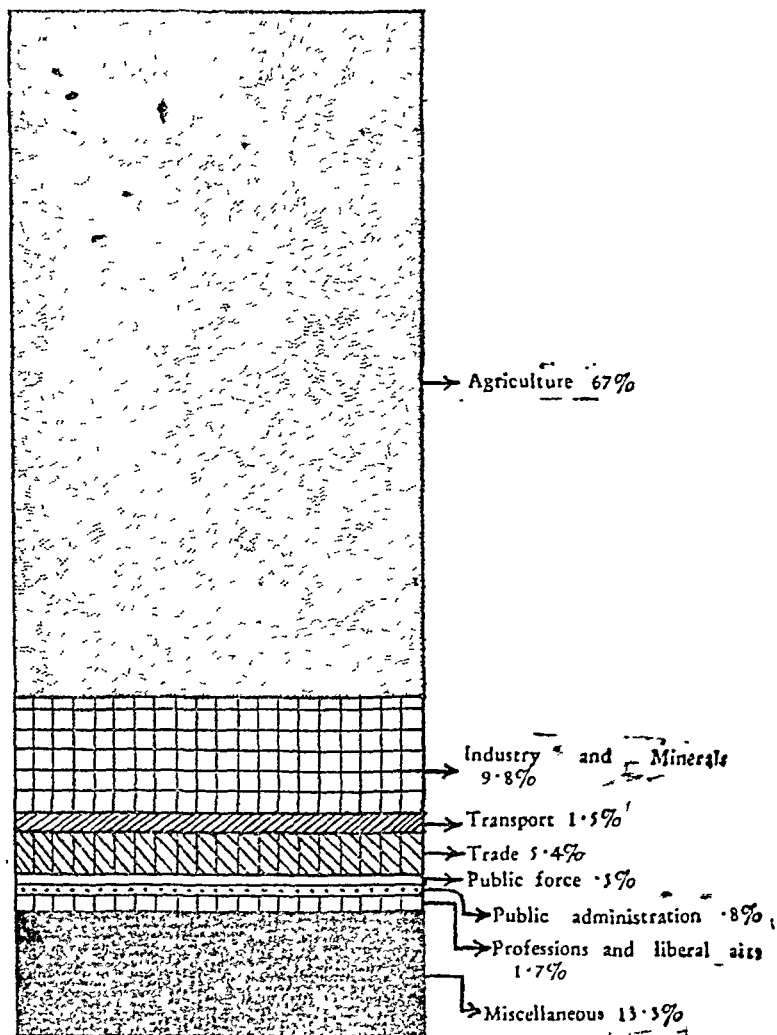
The functional distribution of the population is an index of the stage of economic progress reached by a country. In a modern civilized country a high percentage of population is maintained by manufacturing industries, whereas, in a backward country a larger percentage of population depends upon agriculture.

The figures that we have given above clearly indicate the preponderant position of the agriculture over other occupations. In every province of India agriculture easily takes the first place. The pressure on the land is continuously increasing due to the competition of machine-made articles in consequence of which large number of artisans are helplessly driven to agriculture to eke out their miserable livelihood. This entire dependence of the vast fraction of population on agriculture is a great defect of the vocational distribution of our population. For dependence on agriculture means dependence on rains and one single failure of the Monsoons throws the whole economic machinery of agricultural production, distribution and exchange out of gear, and a large number of persons are thrown out of employment with untold miseries upon the victims owing to the absence of any outlet for the employment of the displaced population. The Famine Commission of 1880 correctly diagnose the situation when they say that at the root of much of the poverty of the people of India and of the risks to which they are exposed .. lies the unfortunate circumstance that agriculture forms almost the sole occupation of the masses of the population, and by way of prescription to remedy this state of affairs they recommend the development of manufacturing industries.

Industries support a little less than 10 per cent of the total population but the bulk of these are engaged in unorganized industries connected with the supply of personal and household necessities and the simple implements of work. Modern organized industries support only 1.5 per cent of the population. In trade and transport on which less than 6 per cent and 2 per cent respectively depend, a considerable number of people is connected with the disposal of various kinds of agricultural products. Among the civilized countries, India has the highest percentage of people dependent on agriculture and the lowest percentage of those employed in the industries, trade and transport. It is a defective policy of our economic system to ignore the development of manufacturing industries and to concentrate all our attentions to the production of raw materials which are commonly exported to

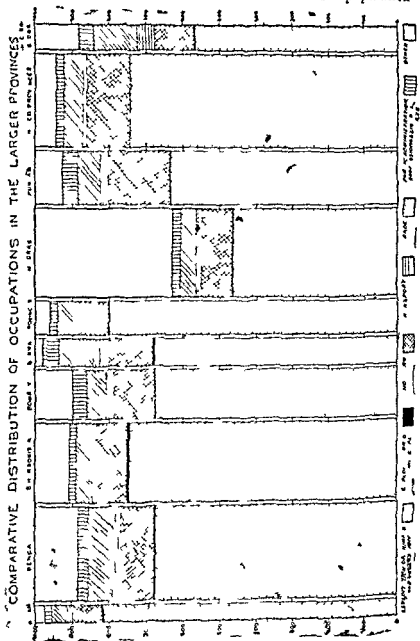
foreign countries for manufacturing purposes. Every effort should be vigorously directed to expedite the pace

Distribution of Population by Occupations



of industrialization and to exploit the economic resources of the land within the country itself which have been so munificently showered by Providence. The systematic

promotion of industrial enterprises will not only bring about a more even vocational distribution of population



through an all-round development of the economic resources of the country, but also bring a more progressive and enlightened class consequent upon the development of industries, trade and transport, which has hitherto remained in rank, ignorance and conservatism.

Health and Vital Statistics

Health is the basis of all activity and its importance in relation to wealth production in a country cannot be over-rated; the output of the stronger and the healthier persons is much more great comparatively than those of the weak who are constantly run down by diseases. This is why, today, every, civilized State has equipped itself with hospitals and dispensaries for the prevention of pernicious diseases and other requisite sanitary arrangements which tend to improve the general tone of public health.

The average health of Indians is far from satisfactory. The low vitality of Indian labour is to a considerable degree the result of the general ill-health of the people caused by unfavourable climatic conditions, inadequate supply of nutritious food owing to abject poverty and low standard of living, insanitary environments and unhealthy social conditions. Several kinds of diseases and epidemics have found a very congenial home in certain tracts of India. Cholera is usually most virulent in Eastern India. Malaria is endemic in many parts of India, especially where the natural drainage system is defective. It is the most baneful disease inasmuch as it is "less a killer than a sapper of vigour and energies. It impoverishes the blood, causes all the forces of man to drop and wither, and above all, brings physical degeneration on the race it smiles." Phthisis, 'a disease of civilization,' is particularly virulent in the industrial centres of the country which are characterized by overcrowding and insanitation and where the labourers have to put up in the most filthy and dingy hovels. This fell disease attacks people when they are at the height of their manhood and womanhood and when their services can be most productive to the community at large. Plague, kala-azar, influenza hookworm are some of the less important diseases but terribly tell upon the health of the population. The most mischievous thing

about these diseases is that they not only cause a heavy mortality among people but also affect the industrial efficiency of the entire nation by considerably reducing the vitality of the people. Our villages where 90 per cent of Indian people spend their life are most defective from the point of sanitation and cannot be called idyllic places as are pictured by some of the poets in their high-strung descriptions. As a result of the general illiteracy of the masses, they are utterly ignorant of even elementary principles of hygiene and sanitation. For sojourners a mere walk to some adjacent village make them realize the truth of our statement. Diminutive clusters of ill-ventilated mud huts with thatched roofs are set out without any sense of symmetry or sanitation. The village rubbish and cow dung are thrown in heaps either near their dwellings or on the outskirts of the village which stagnates and poisons the whole of the surrounding atmosphere giving rise to many diseases. The village pool, a universal possession of our Indian villages, which is further emptied of its earth annually for repairing houses when it goes dry in summers, becomes in the rainy season a good nursery capable of breeding countless anopheles where all the antimalaria measures prove abortive.

In this connection it is very instructive and interesting as well to study the vital statistics of the country. By vital statistics we understand the records pertaining to the duration of life and the circumstances affecting its duration. A comparison of our vital statistics with the vital statistics of other countries will reveal the deplorable state of affairs. The averages of birth and death rates per thousand for the period 1901-11 for some important countries are given below —

	Birth-rate	Death-rate
India	38.18	33.94
European Russia (1896-1905)	.. 48.47	31.41
Germany (1902-11)	32.31	18.39
Japan (1900-1909)	.. 32.85	20.86
England and Wales	26.8	15.15
France	20.25	17.32

It need scarcely be pointed out that the exceptionally high birth-rate in our country is accompanied by an equally high death rate so that from the point of view of

population there has been much smaller increase than in other civilized countries and that too at an immense loss of time, money and energy to the parental humanity of India. People are accustomed to bring forth fresh souls in to the world believing that children are a blessing and a God-given gift without making any provision for them. They ignore the principle that 'people should not bring children into the world, till they can see their way to giving them at least as good an education both physical and mental, as they themselves had.' The birth-rate is the highest in India as there is a religious sanction for universal and early marriages, irrespective of economic considerations particularly among females and among the Hindus. 'Every Hindu must marry and beget children—sons if you please—to perform his funeral rites lest his spirit should wander uneasily in the vacant places of the earth.' Early marriages of people when they are quite negligent of the responsibilities of mated existence lead to an early exhaustion in both of the sexes which is also hastened by the debilitating effects of malarial fevers to which all are subject. At an age when they should have been most enterprising they are found spiritless and bereft of all virility. The birth-rate is further aggravated by warm climatic conditions and the low standard of living prevailing in the country. Voluntary abstention from birth-control with a view to checking multiplication is almost entirely unknown in India.

The death-rate is also high in India which is attributable to the chronic poverty which makes the people peculiarly non-resistant to diseases like malaria, plague, influenza, hookworm and other respiratory diseases too numerous to be dwelt upon. The high death-rate is only a consequence of the high birth-rate for the two go *pari passu*. The average expectation of life in India is very small. The census figures show that "while the average expectation of life of a male in England at birth is nearly 46 years, it is 22 years in India." The inferior longevity of the Indian people is a great social and economic danger as the men who have gathered experience and wisdom and in whose bringing up an enormous amount of money, energy and time has been expended are carried off 'when their power to be of service to the community is at its highest.'

Infantile mortality—The two outstanding features about the death-rate in India are the high infantile mortality and the high number of female deaths at the reproductive ages. The infantile mortality is notoriously high in India when compared with other countries. In industrial centres owing to inadequate sanitary arrangements the infant mortality is still higher, for instance in Bombay it is 556 per thousand as against 63 in London. In Calcutta it is 386, Rangoon 303, Madras 282, Karachi 249, and Delhi 233. Owing to indiscriminate and early marriages many weak and rickety children are born of immature parents, they cannot survive under the best possible conditions due to their natural debility. This heavy infant mortality may be attributed to (i) the immaturity and ignorance of mothers, (ii) the physical labour and hard exertion undertaken by prospective mothers up to the very day of confinement, (iii) dirty midwifery together with certain unhealthy social customs, (iv) the habit of drugging fretful children (with poisonous pills) while mothers are at work, (v) improper feeding, and (vi) the total ignorance of the hygienic methods of rearing children. Born in dirty and polluted environments, reared on opium, bereft of fresh air and sunlight, these children have few chances of growing up healthy citizens.

Female mortality—Another alarming factor about the death rate of India is the excessive female mortality at the reproductive ages (15 to 40). The prevalence of *pardah* which confines women within the four walls of the house with the consequence that they are deprived of pure and fresh air, and early marriages which subject girls to risks of motherhood at an age when they have not yet reached full physical maturity are a few of the potent causes of the high mortality. A large number of child wives 'march from the nuptial bed to the funeral pile. Nervous debility, consumption, and the uterine diseases create havoc among them.' All this speaks of the enormous wastage of human life taking place in our country.

Table showing rate of infant mortality by age groups per 1000 live births



Bombay's New Buildings for labourers

		Working classes	Non-working classes
Under 1 day	..	8	8
1 to 7 days	..	26	38
7 to 30 days	..	26	23
1 month to 3 months	..	21	22
3 months to 6 months	..	22	27
6 months to 1 year	..	99	85
		<hr/>	<hr/>
TOTAL	..	202	203

In order to prevent the wastage of human life and the consequent ruthless operation of the inexorable law of nature, every step calculated to improve the standard of public health and increase the longevity of people should be welcome on both economic and ethical grounds. The strict enforcement of the Sarda Marriage Act, the systematic diffusion of knowledge about sanitary laws, the efficient establishment of maternity houses on a large scale, the provision of qualified midwives and medical help, strict abolition of the practice of drugging children with opium when mothers are at work in factories, the supply of good drinking water in rural areas, the free distribution of quinine and phenyl during the malarial season,—all these factors will not only go a long way in exterminating unhealthy diseases but also considerably enhance the physical energy, stamina and industrial efficiency of the Indian people.

Efficiency of Labour in India

"It is the efficiency of labour that counts." Indian labour is generally regarded as much less efficient than the European labour. Dr. Slater admits that though the inferiority of the Indian labour is generally overestimated, it is real enough, and is the cause of low wages prevailing in the country. In many types of work, an Indian labourer generally excels his Western companion but on the whole he is stamped as an efficient worker.

People sometimes disagree and maintain that an Indian labourer is not inefficient from the very beginning of the growth of the modern system of production but he has been classed as such, due to the absence of the proper

understanding of the real situation. He has been made inefficient by the new environment in which he is made to work and handle those tools and instruments which he is not accustomed to use. Any person who is made to work under these conditions will be called inefficient.

It is undoubtedly a fact that the physique of the average Indian worker, due to poor dietary, the ravages of disease and the climatic conditions is inferior to that of an English worker.

The unbelievable overcrowding of workers in Bustees of industrial towns of India, dirty, damp and badly ventilated small tenements in which our labourers usually live and breed, and the most insanitary surroundings in which these buildings are situated, bring the efficiency of workers to its lowest ebb. 'Bad houses spell squalor, drink, disease, immorality and crime, and in the end demand hospitals, prisons and asylums in which we seek to hide away the human derelicts of society.'

The curse of illiteracy deprives them of hopefulness, mental improvement, intelligence and cheer, which are, as Marshall has pointed out, allied conditions of vigour and strength. Absence of technical education also contributes a great deal to the low efficiency of the Indian labourer. Conservatism of the people, their caste and religion which make labour immobile, brings about a set back in the productive capacity of the individual worker.

The low standard of living of the people may be regarded as another cause of inefficiency. It is both the cause and effect of the low wages found in our country. It falls far short of what is required for full efficiency and is barely enough for sustaining bodily strength and vigour. The worker cannot afford a sufficient quantity of wholesome food, his clothings are scanty while his expenses on education are almost nil.

The evil of drink is a great bane to the working classes inasmuch as it impairs their vitality and efficiency, and renders them poorer consumers than they might have been.

The habit of absenteeism, the casual nature of work

and the fact that an Indian labourer is also an agriculturist, retard the growth of a permanent and efficient labour force in India.

Remedies

The attempts to make labourers live a better and a fuller life are full of promising results. Efforts are being made to provide better housing facilities to Indian labourers. These improved lodgings, the sanitary surroundings, pure drinking water and fresh air will have a remarkable effect upon the physique of the labouring classes resulting in increased efficiency.

Provision of facilities for general and technical education will lead to increased efficiency and better understanding of the work. It will develop his intellectual qualities, broaden his outlook and make him more hopeful and less conventional.

Attention should be directed to increase the standard of living of the labouring classes. With increased wages and other welfare arrangements, it is hoped, the condition of the worker will improve materially. Increase in efficiency would come through a better standard of living.

An improvement in sanitary and hygienic conditions, the prohibition of overcrowding within the factories, the provision of adequate medical help to the labourers and the prevention of many dreadful diseases found in labour Bustees and slums of the industrial towns, will go a long way in improving the condition of the working classes. In industrial provinces a special Health Department to deal with industrial Hygiene and disease should be started. Maternity Benefit Acts, the provision of creches for the use of children and an Institute of Nutrition are other desirable reforms needed by our labourers.

Extensive welfare arrangements to utilize the workers' leisure time and to make him contented and happy have been started by many employers, Local Boards, Trade Unions and other social Institutions. Various Acts passed by the Imperial and Provincial Governments to protect the labouring classes and the activities of the International Labour Office are affecting very desirable improvements in the condition of the Indian worker.

CHAPTER XIII

CAPITAL

Definition of Capital

Besides the primary requisites of production, land and labour, there is another indispensable factor of production, viz, capital which has come to play a very important part in the modern industrial organization and 'without which no productive operations beyond the rude and scanty beginnings of primitive industry are possible'

Capital as a factor of production is defined as that form of saved wealth, other than land, which instead of being directly consumed in the satisfaction of present wants, is employed productively for future wants. This form of saved wealth which 'fills our factories, farms, store houses, and docks,' is not capable of providing satisfaction directly to our wants. Such wealth is devoted to the production of consumable goods. Taussig aptly observes "Capital, then—that is, producer's capital—is not in enjoyable form, it is not now a source of satisfaction. It exists for the purpose of increasing consumer's wealth." There are two ways of disposing surplus wealth over one's present requirements, either he can devote it directly in the satisfaction of his immediate wants whose number is legion, or he may set it aside and keep it for further production with the intention of meeting his future needs. Saving in the form of simple hoarding, however, does not lead to the creation of capital because it may or may not be utilized for the production of consumable wealth. Capital is, therefore regarded as that part of an individual's saving which is utilized with the purpose of getting a future income. In this sense, capital would consist of all invested money in productive concerns, tools, implements and instruments, machines, buildings, and plants, etc, utilized in the act of production with a view

to secure benefits in the future rather than in the present. Thus all capital is wealth, though all wealth is not capital. Capital is an instrument of production while wealth is merely an object of consumption. The conception of capital, according to Marshall, involves two fundamental attributes of "productiveness" (i.e., yielding an income) and "prospectiveness" (i.e., the idea of waiting and saving), while wealth suggests the idea of consumption and pleasure derived from possession.

"The idea of capital does not connote a certain *class* or *kind* of goods but a certain *condition* or *purpose* of goods. All wealth may at some time or other become capital, just as every physical element may, at a certain degree of temperature, become a gas. The feature, condition or purpose that makes wealth capital is *its productive use in conjunction with labour*." A horse maintained for cultivating the soil and transporting the harvested crops is capital for it is an instrument of production to the cultivator, but the same horse if begins to be used for taking mere pleasure trips would be classed as wealth. Similarly if a farmer, out of his granary, spends some amount of grain in feeding himself and his cattle, in paying wages to his labourers, or in using it as seed, it is capital, but it is not capital if it is given away in charity. Again, the same goods may be capital to one while consumption goods to another. A harmonium is a consumable wealth to one who plays upon it for the sake of pleasure and recreation, but it is capital to a professional musician.

It also follows that all money is not capital. From economic point of view only that money is capital which is utilized for productive purposes, while the money hoarded or used for purchasing articles which do not aid in further production of wealth is not capital.

Origin of Capital

Capital is a stored-up labour. It is an artificial factor of production—the joint product of land and labour. Suppose a grass-cutter who earns his living by the sale of grass gathered by him with the aid of his hands finds that he can cut more grass and earn more wealth if he had a reaping-hook to cut grass instead of gathering it

by hand. Realising this, he begins to save, say one pice a day out of the income that he daily gets and after a week he accumulates a sufficient amount to purchase a reaping-hook from the blacksmith. This reaping hook, which is nothing but a material form of his past labour, makes his efforts more productive inasmuch as he is enabled to earn more income with the same amount of labour and time he expended previously to the getting of a reaping-hook. The same principle holds good in all the kinds of capital—tools, machinery, ploughs and countless number of other things which are being used in the production of consumable goods. The production of capital involves the sacrifice of the present enjoyments that the command over a certain amount of labour could give for future satisfaction which the investor expects to derive from his outlay, it always presupposes a preference for future goods rather than for present enjoyments and it involves a sacrifice of the present to the future." Capital, therefore, is the result of abstinence as well as production. By 'abstinence' we mean nothing more than abstaining from present enjoyments in order to secure some future end. Saving helps the growth of wealth but not the formation of capital. As the society has developed from one stage to another, the stock of capital goods has gone on increasing its variety and complexity.

Forms of Capital

Capital exists in a remarkable variety and is used in various forms. Some of the classifications or divisions of capital are given below—

(1) *Fixed and Circulating Capital* Circulating capital is that which can be used but once, or, as John Stuart Mill states, 'that which fulfils the whole of its office in the production in which it is engaged by a single use'. Coal used as fuel, the wages of the workers, manure that is mixed with the soil, store of food for the support of labourers, leather made into boots, steel made into a safe, raw cotton converted into cotton cloth, seed sown in the field are examples of circulating capital. Capital which exists in a durable shape, renders continuous services and the return to which is spread over a correspondingly

greater length of period is called 'Fixed Capital;' examples of this kind of capital are factory buildings, tools, machinery, canals, tunnels, and railway trucks which render a continuous service to the owner.

(2) *Trade (or Production) and Consumption Capital.* Production capital includes all those things which are used for productive purposes such as raw materials of manufacturing industries, or tools and machinery needed in any act of production, or fences, drains and barns on an agricultural farm or sheds, offices and factory buildings where actual work of production is carried on. Consumption capital, according to Marshall, consists of goods in a form to satisfy wants directly; that is, goods which afford a direct sustenance to the workers such as food, clothes, house-room, etc. Consumption capital must be distinguished from consumption wealth as the former is consumed mainly for the maintenance and improvement of health which is necessary for the efficient work, whereas the latter is taken merely for the sake of pleasure and enjoyment.

(3) *Specialized and Unspecialized Capital.* They also go by the corresponding names of *sunk* and *floating* capital. Specialized or sunk capital is that which can be used for only one particular process and cannot be withdrawn from the investment without loss, the best example of which may be cited of the capital invested in tunnelling a railway line. Capital is said to be unspecialized, free or floating when it can fulfil more than one function, and can easily assume a different form, e.g., money, fuel and raw material.

(4) *Material and Personal Capital.* Material capital includes concrete and tangible goods which are used in production and can be transferred from one person to another such as a carpenter's tools or a surgeon's instruments. Personal capital comprises an individual's skill, efficiency and ability which cannot be transferred. The skill of a lawyer and the melodious voice of a singer are examples of *personal capital*.

(5) *Remuneratory and Auxiliary Capital.* Remuneratory or wage capital consists of wealth which is devoted to the payment of wages to labourers employed in pro-

duction Auxiliary or instrumental capital of all other forms of capital which aid labour in production, e.g., machinery, raw materials, tools, etc. The extent of these two forms of capital in an industry depends upon the nature of its business and the application of the law of substitution by the employer

Functions of Capital

Capital has come to play such an important part in the modern industrial organization that the present age oftener than not is regarded as the regime of capitalistic production. In this age of *roundabout methods of production*, capital has become a most important requirement of the productive effort. By roundabout process of production we mean that the production of goods is not direct, as in the primitive stage, but that the productive process involves the use of tools and machinery, and a prolonged interval of time is taken between its inception, and completion. In order that capital may fulfil its functions, it must be consumed, its existence depends not on its preservation and retention, but on its being used up, whether rapidly or slowly. In his book, *Elements of Economics*, Thomas has summarized the functions of capital in the following manner

1 *The provision of subsistence*, in the form of food, clothes, shelter, maintaining the labourers and producers while they await the results of their efforts. Under modern conditions, productive processes are long and roundabout hence the provision of subsistence is an important factor

2 *The provision of appliances* is essential to production, and now-a-days necessary to enable production to be speedy, accurate and automatic, to relieve the worker of drudgery, fatigue and over exertion, and to correlate the various productive agencies

3 *The provision of materials* The materials of industry are today of the utmost variety and complexity, and include not only such raw products as are derived from nature but also semi-manufactured and manufactured articles which are utilized as the raw materials in yet another stage of industry and manufacture

Efficiency of Capital

The efficiency of capital depends upon (1) its fitness as a factor of production, and (2) the method in which labour is applied to it.

(1) "Fitness depends on the suitability of the capital to the purpose in hand" The size of the factory building and the working capacity of the plant and the machinery should depend on the quality and quantity of work to be turned out. A large sugar factory equipped with modern machines for crushing one or two thousand maunds of sugarcane throughout the whole of the season is purely a perverted economy. Similarly, a small plant would prove inadequate from the point of efficiency for the production of materials on a large scale. A new or up-to-date machine is generally far more efficient and economical than a worn or old-fashioned one because with the same amount of labour the former can produce a larger quantity and better quality of goods.

(2) In the previous chapter while discussing the efficiency of labour we had the occasion to point out that it was largely affected by the nature of the capital with which it was employed; similarly, the efficiency of capital is greatly affected by efficiency of labour. The best of machines or the best of materials would prove futile if handled by unskilled labour. A bad workman quarrels with his tools. An inefficient workman brings about not only much waste of raw materials and greater wear of machinery through his careless handling but he at the same time incurs the risk of running into serious accidents through negligence or inability to keep pace with the regular movements of the machine. Hence the efficiency of capital is interdependent.

Is Land Capital ?

From the social point of view land is not included under capital for some obvious reasons. True, it is a necessary instrument of production but it differs from capital goods inasmuch as the former is a free gift of nature, the amount of which is limited definitely and it is beyond human ingenuity to increase its quantity, whereas the latter are the product of labour. To the objection that much land has been so improved by human

effort that it is no longer a free gift of nature, it may be pointed out that we, in accordance with our definition, classify all improvements in land such as fencing, drains, and wells etc., as capital while place the land itself in a separate category

Again, in contrast with land, capital goods wear out and require constant repair and replacement. Land does not wear out. To the objection often raised that fertility of land also wears out, it may be said that this is not true in respect of the area and the situation of land which need no repair or replacement.

Growth of Wealth and Capital

The causes and conditions which determine the accumulation of capital differ extensively in different countries and at different times and even among the same people. Capital represents a surplus of production over consumption and so the process of the growth of capital consists in the increase of the fund of wealth from which savings may be made, and the determination on the part of its owners to refrain from immediate consumption and to divert wealth into productive channels. The maximum limit beyond which the total capital of a country cannot increase is determined by the surplus of the national dividend over the total wealth consumed. The chief conditions which favour or retard the accumulation of capital are three —

- 1 The power or ability to save
- 2 The will to save
- 3 The opportunities to save

1 The power to save implies an excess of income over expenditure, such as may occur from increased production or more economical consumption. The power to save depends upon the following factors

(i) *Natural resources and powers* If a country is rich in her natural resources such as climate, mineral wealth, forest wealth, water-power, good harbours, etc., it will have greater wealth and, therefore, a greater capacity to save

(ii) *Efficiency of labour and capital* The existing stock of labour and capital within a community determines

the production of wealth and, therefore, the accumulation of capital likely to take place in the near future.

(iii) *The share taken by the government* Out of the national dividend, a larger amount of money is taken away by the government in the form of taxes, etc., then to such an extent the power of the people to save will suffer.

(iv) *Means of transport and communication.* These reduce the cost of marketing and bring the conditions of distant market within easy knowledge and cause a free mobility of labour and capital thus adding to their efficiency and increasing the total wealth of a country.

In India accumulation of capital is very slow because the power of the people to save is very little. Due to the want of proper exploitation of the natural resources and the full utilization of the modern methods of production people hardly get any surplus above the bare necessities of life.

2. But mere power to save is of little consequence unless it is supplemented by the will to save. By the will to save we mean the readiness to save when one is provided with surplus income over his expenditure. The will to save depends upon many factors which are chiefly mental.

(i) *Prudential qualities.* Some people are thrifty while others are improvident by nature. Prudent persons who possess sufficient foresight into the future put aside a part of their income as a reserve against the rainy day, and abstain themselves from the immediate consumption for the sake of fuller enjoyment in the future. This will-power to save is much more strong in civilized persons than in savages. In India, we have the element of foresight in substantial measure among the rich and middle class people who have greatly succeeded in accumulating capital.

(ii) *Moral qualities.* A man's moral perceptions may not be strong enough to induce him to save. One who has no strong interest in others, or sufficient affection for the members of his family or no desire to avoid dependence in old age, will save less than another person in whom the above desires are very strong.

(iii) *Hope of rising in social scale* In modern societies the possession of accumulated wealth counts much inasmuch as it gives power over other men in the economic sphere and increases the prestige in the political and social arenas. Many ambitious people toil in the pursuit of wealth not for its own sake but for the power that wealth carries with it and thus indirectly and substantially contribute towards the increase of the country's capital.

3 The opportunities to save depend upon the following factors

(i) *Security* Saving is encouraged where there is security of life and property and where people are confident of fully enjoying the fruits of their savings. Obviously, no person would save if he is constantly harassed by such factors which would deprive him of his savings. The presence or absence of the following factors determines to a very great extent the growth of wealth in a country

(a) *Stable government* which would maintain law and order in the country and keep people immune from violence, fraud, theft, communal riots and foreign aggression, (b) *Security against the exactions of the state itself*, these may be arbitrary or tyrannous such as high taxes, inefficient judicial system and bad laws, (c) *Physical security* such as from frequent visitations of earthquakes and volcanic eruptions, floods and storms, famines, etc., (d) *Security against social rites and customs* which favour lavish expenditures, (e) *Economic security* such as complete absence of tyranny of capital over labour, of landlords over tenants and serfs, of custom preventing free choice of occupation, etc.

(ii) *Facilities for investment* With the increase in the facilities and means for investment, where people can deposit their earnings without any fear of loss more savings will be encouraged. Banking institutions such as private and joint stock banks, savings bank, assurance companies, co-operative credit societies are very important for encouraging the accumulation of capital.

(iii) *The rate of interest* In many cases men are also encouraged by the interest which they get on their

savings. Other things being equal, the higher the rate of interest (i.e., the greater the reward of waiting) the greater will be the willingness of persons to wait and to save capital by postponing present enjoyments. A high rate of interest will stimulate people to save more and thus help the accumulation of capital.

English writers have often branded Indians with the habit of hoarding. But they forget that long before the establishment of British supremacy in India there was no security of life and property which was an essential factor for saving. During the decline of the Mughal Empire and the beginning of the Company's rule, the country was torn by anarchical conditions of life and devastated by incessant wars and plundering bands of marauders, and the ever-recurring calamities of the ravages of famines in one part of the country or the other completely broke down the backbone of the Indian peasantry. All these unfavourable factors tended to make the people more improvident, as they had no security to realize the fruits of their savings. In such anarchical times people cultivated the habit of hoarding their valuables which could be easily hidden and used when needed, but due to ignorance and lack of good opportunities to save this habit still survives though the need for it has passed away. Our vast majority of people, who live in villages far from the cities, are quite ignorant of the safest form of investment. In order to tap the meagre resources of the poor agriculturists and to teach them thrift and frugality, more co-operative credit societies on an extensive scale may be started—the only solution by which we can make the dormant resources of the people an effective instrument of production.

Machinery

The rapid invention of new machines marked the beginning of the Industrial Revolution and brought about a total transformation in the methods of production. As long as the motive force remained unutilized these new machines could not make much headway. But with the utilization of steam-power and electricity, the machine era progressed with the greatest rapidity accomplishing unimaginable and insurmountable feats in the sphere of production,

Its Advantages

(1) Heavy, arduous and complicated tasks which were beyond the muscular strength of man, are now quickly, conveniently and satisfactorily accomplished through the aid of power-driven machinery. Machinery, thus, diminishes the strain on human muscles and relieves men of the grievous fatigue and certain disagreeable kinds of labour that were extremely distasteful. For example, the steam hammers have done a great deal to relieve the blacksmith from the heavy and arduous task of hammering red-hot iron. The cranes can very easily lift a burden.

(2) Machinery takes up routine and monotonous work, lessens the monotony of life and thereby relieves the strain on human muscles.

(3) As machinery exactly repeats its movements with amazing rapidity and wonderful precision, therefore, work can be done much faster, and far more accurately and uniformly than by human labour. In 1895, with manual labour it took 216 hours to print and fold 36,000 pages of a newspaper while today with the newest type of machinery the same amount of work can be accomplished in an hour with greater ease and efficiency. Thus, machinery leads to greater efficiency and increased production of wealth.

(4) Machinery not only relieves the strain on human muscles but also accomplishes extremely delicate kind of works most easily, quickly and finely.

(5) Formerly, the work which required special skill and could be done only by skilled workers is now performed by workers of average skill and ability owing to the simpler operations made possible by the introduction of machinery.

(6) Machinery has enabled the production of 'interchangeable parts.' Machinery can manufacture on a large scale identical machine parts which are perfectly flawless and easily interchangeable as a result of which the usefulness of machinery has immensely increased. Formerly, when any part of a machine was broken, either the whole of it had to be discarded or taken back to the workshop.

(7) Machinery has greatly facilitated the mobility of labour from one trade to another by weakening the barriers between different trades because of the apparent fact that many machines which are in use in one industry are similar in general character to those used in many other industries.

(8) As a rule every mechanical invention increases the output enormously at a lower cost per unit because of the economies of division of labour and large scale production thus benefiting the consumer class as a whole.

(9) It goes without saying that machinery has widened the human outlook and elevated the quality of labour by demanding greater intelligence, resourcefulness, responsibility and character among operators. "The more delicate the machine-power, the greater is the judgment and carefulness which is called for from those who look after it. A machine-man today is more trustworthy, able and highly paid than the labourer under the old system."

(10) Machinery enables us to utilize the forces of nature, e.g., wind, water, steam and electricity for the benefit of mankind.

Disadvantages of Machinery

Every problem has two sides and machinery is no exception to this universal formula. There are some schools of thought which are too accustomed to paint its horrid side completely forgetting the advantages it has conferred upon mankind, and which deplore the introduction of machine production on the grounds that its adoption has brought in its train 'moral degradation' and 'intellectual desolation' causing tremendous hardships to the labouring classes.

1. The most important objection that is often made by the antagonists is that the advent of a new machine in an industry displaces labourers throwing them completely out of employment which means starvation and misery for the displaced labour. But it is a questionable argument not actually proved by facts.

(a) It has been stated that but for a temporary period, machinery instead of displacing labour considerably in-

creates the room for employment. The displaced labour is absorbed in the same or in other industries. Machinery owing to its quick and large production considerably diminishes the cost of production leading in many cases to the increased sale of commodities, which creates a greater demand and, therefore, employment for labour.

(b) Secondly, the absorption of the displaced labour is made possible, as some workers are employed in the construction and repairs of this machinery.

(c) Lastly, the cheapening of articles manufactured by the machinery leaves buyers more to spend on the purchase of other commodities, whereby the displaced labour is enabled to get into those industries.

However, it must be admitted that a permanent loss is sometimes inflicted through the introduction of machinery on particular classes of labourers who have acquired by experience and training special kind of skill and delicacy of touch. Prosperous weavers of India, whose fame was far renowned throughout the civilized world and others engaged in handicrafts and cottage industries, have been, with the importation of cheap machine-made goods from the foreign countries, helplessly thrown out of hereditary professions only either to be perished in semi starvation or driven to join the ranks of unskilled labourers never to recover from its fatal blow. Again, the "long run" argument affords no relief to those who suffer in the "short run."

2 "Many people object to power-driven machinery" says Prof Chapman, "because they dislike its present consequences in the form of huge dreary towns overhung with a pall of smoke." Machinery gives rise to large crowded cities and degraded slums wherein labourers have to live in cramped, dirty and dingy apartments which are prejudicial to their health and happiness. In big industrial towns and cities on account of promiscuous mixing of several races having different codes of morality, the morale of the people gets relaxed and deranged. Prostitution is encouraged and many social ills come into prominence. Disease and drunkenness, family breakdown and crime, intemperance and immorality are some of the evil consequences which follow in the wake of a persistent

and continuous agglomeration of a large labour force in industrial centres.

But these depressing consequences are removable and have been already removed in a substantial measure in the advanced countries of the world. There are many industrial centres which are a complete contradiction of the view that big industrial towns must necessarily be associated with congestion, soot and squalor. "The advent of the garden-city movement, the spread of the doctrine of town-planning and the municipal control of the location of factories in Great Britain, Germany and America, have clearly demonstrated that the present confusion and disorder in our cities are due, not to any inherent defect in large-scale production, but to the misdirection of industry and the absence of that control and guidance which are necessary in a transitional stage of such importance."

3. Nor does there seem to be any truth in the contention that the use of machinery banishes artistic quality from our products, undermines taste and brings about ugliness in our surroundings. It may be replied to this argument that the bad effects are not caused by the proper use of machinery but by its abuse. Little artistic feeling can be expressed in making plain articles of daily use. On the contrary, it furthers the cause of Art inasmuch as it can repeat artistic designs cheaply and thus bring them within the reach of the masses. Moreover machinery, today, according to S. E. Thomas, "has reached an almost inconceivable state of delicacy of touch and perfection of execution; it is capable of minute work to a degree which man can never equal."

4. As machinery wipes out of existence the handicraft artisans, it necessarily reduces the number of master craftsmen who took genuine interest and pride in their unrivalled work and tried to maintain the high quality of the product. But today the worker is reduced to the position of a mere feeder of machines without any interest and enjoyment. Certainly, the worker's life becomes monotonous but as regards his enjoyments it may be argued that indirectly with his increased wages he can enjoy better varieties of life.

5 Machinery gives rise to large scale production which brings in its train over-production due to mis calculations of demand in the market resulting in serious trade crisis and unemployment of labourers who are faced to accept by necessity lower wages with a consequent fall in their standard of living

6 It is also argued that the employment of women and children in factories which is made possible by the introduction of machinery is too degrading both physically and morally. But the criticism seems to lose much of its force inasmuch as their employment can be prohibited by legislation and the attendant degradation can be easily arrested

7 Other critics declaim against factory life on the ground that the use of machinery under proper conditions is impossible and that machinery always leads to degraded and unhealthy life both physical, mental and moral of millions of persons. To them the old system of handicrafts and cottage industries means less wealth for the nation but more welfare, and the modern system of machine-driven mills and factories is a symbol of social degeneration

By way of concluding remarks, we may say that there has grown a tendency to exaggerate the evils of machinery which in actuality are temporary and remediable. There is nothing inherently immoral in a machine, it exactly like a hand tool aids man in production with the sole exception that it turns out commodities on a much larger scale and with immensely increased efficiency. It would not be out of place to quote the opinions of Karl Marx, the great socialist leader of the nineteenth century, who always espoused the cause of the down trodden labourer. He does not object to the use of machinery in recognition of its immense advantages, but objects most vehemently when it is employed by the capitalist employer for the unholy exploitation of labour. He writes. "Since, therefore, machinery considered alone, shortens the hours of labour, but, when in the service of capital, lengthens them, since in itself it lightens labour, but when employed by capital heightens the intensity of labour, since in itself it is a victory of man over the forces of nature, but

in the hands of capital, makes man the slave of these forces."

The advantages conferred upon mankind by machine production are too numerous to be dwelt upon, the absence of which would have left the world considerably poorer. It is due to the large and cheap production of commodities with the help of machinery including other new forces of organization that the luxuries of yesterday are tending to become the necessities of today. Machinery has produced evils because labourers have been forced by sheer necessity to become its dumb servants. Machinery should be organized for the benefit of all and it should be made the servant of labour and not *vice versa*. With the growth of social conscience and developing democracy, temporary abuses such as long hours of work, exploitation of child and female labour, insanitary conditions of work, over-crowding of people in unhealthy cities, frequent industrial accidents and unhealthy physical, moral and social conditions of industrial centres, which are associated with industrial life, will be wiped out of existence at no very distant date.

CAPITAL IN INDIA

Agricultural Capital

Nature has showered her bounties on the country with a lavish hand, but man in India owing to the paucity of capital has failed so far to profit by these adequately. A brief glance on the agricultural industry which is the primary industry of India, will convince us of the fact that India is the most backward country in agriculture having probably the lowest yield and smallest profits per acre of all the civilized countries. Agriculturists still adhere to the old ways of cultivation which involve a terrible wastage of their productive efforts and of the natural resources as well.

Cultivation in India is carried on with a minimum of capital. Practically speaking, there is no saving of capital due to the backward and inefficient farming which leaves a very little margin of surplus above the necessities of life. Owing to the absence of any proper agency which can finance agriculturists at the time of sowing or any

other emergency except a few co operative credit societies here and there. The Sahukars and Mahajans take the advantage of peasant's ignorance and necessity and unscrupulously charge exorbitant rates of interest from the crushing weight of which he can never find his escape.

An agriculturist's capital consists in the form of farm implements which are comparatively 'few in number, simple in kind, smaller in size, obsolete in character, and very insignificant in value'. They are light, portable and within the capacity of draught oxen. His capital in the shape of instruments of production includes (i) the plough and the ploughshare used for the upturning of the soil, and driven by either a pair of bullocks or a pair of bull-buffaloes or a camel. The antiquated plough is such that it scratches only a few inches of the upper surface of the soil and does not invert it. The main advantages of the light Indian plough, as recognized by even eminent authorities are that it is within the haulage capacity of ordinary draught animals, and secondly, its cultivation does not lead to the evaporation of moisture which is lacking in the Indian soil owing to its dry nature and the seasonal character of the rainfall, (ii) the wooden yokes in which bullocks are yoked either for hauling the plough or at the time of lifting water from the wells, (iii) the seed drill which is generally made out of a long, hollow piece of bamboo with a funnel at the upper end, facilitates even distribution of seed into the newly-made furrows by the plough—to the haddle of which this implement is tied while sowing, (iv) the *pata* or the leveller used for levelling the field preliminary to sowing, (v) a massive wooden roller used for crushing clods, (vi) a *chersa* (a big leathern bucket) for drawing water from the wells, (vii) a big and heavy rope, (viii) a wooden structure of strong logs of wood raised on one side (if the well is a broader one more can be raised) for drawing water, upon which a pulley is set which facilitates the movement of the rope fastened with the leathern bucket, (ix) a spade or *khudari* used for irrigating and digging purposes and to some extent in assisting the ploughs, (x) the *khurpi* (trowel used for weeding, and spacing out), (xi) the *hasia* or the sickle used for harvesting, (xii) the *jeli* or five fingered fork



Steam Tractor and Modern Plough at Work

used for upturning the harvested crop when it is being trodden by the feet of the bullocks for separating the chaff from the corn ; (xiii) a long, rough thick-woven cloth used either in covering the crop on the threshing floor from rain or winds or in taking corn to the market ; (xiv) the cart used for transporting purposes, but owing to its prohibitive cost it is not within the reach of every peasant. The total number of carts in India amounts to over half a crore ; (xv) the grain set aside for sowing the next crop. At present, owing to the extreme indebtedness of the peasant he is forced to part with all his produce at the threshing floor and when the time of sowing comes he resorts to the mahajan who provides out of his *khatti* any quality of grain the appreciable part of which when sown fails to germinate. Recently, the Agricultural Department has introduced certain new and high-yielding varieties of grains which have found much favour with our Indian farmers, wherever their utility has been clearly demonstrated to them ; (xvi) the farm manure for renovating the exhausted properties of the soil. But the major portion of the farmyard manure—which is the commonest type of manure used in India—is used as fuel and whatever remains, it is preserved and applied in such a wasteful manner that the real utility of it when it goes back to the fields completely vanishes away ; (xvii) wells. The sinking of wells is beyond the means of an ordinary cultivator ; the number of wells used for irrigating fields is small owing to the paucity of funds with the agriculturists, and many of them are *kuchha* wells the water-yielding capacity of which is ridiculously small : (xviii) cattle constitute a valuable possession of the cultivator. The live-stock represents the largest item of India's agricultural capital and it supplies not only energy to the agriculturists but also many raw materials for the development of various manufacturing industries. But the breed of the capital is much deteriorated and epidemics cause appalling mortality among cattle, rinderpest alone contributing to over one lakh deaths annually. The Imperial Institute of Veterinary Research at Muktesar and the Imperial Veterinary Serum Institute at Izatnagar (Bareilly) are doing noteworthy work in combating the various cattle diseases such as rinderpest, foot and mouth,

haemorrhagic septicaemia, black quarter and anthrax. The absence of an adequate supply of fodder grazing grounds is the root cause of the degenerated quality of the Indian cattle.

With such inefficient methods of tillage, crude ways of water-lifting arrangements, inadequate and deteriorated quality of manure, unsatisfactory provision of seeds, and insufficient and inefficient possession of cattle power, it is no exaggeration that the agricultural yield per acre in India is very low in comparison with other countries where farming is carried on with the most up-to-date scientific methods. It is now being increasingly realized that the progress of the nation is intimately bound up with the development of agriculture and the progress of villages wherein lies the soul of India.

Although it is not advisable nor feasible to introduce wholesale labour-saving machinery in Indian agriculture, the improved type of implements like the modern iron ploughs, machines for chopping fodder, installation of machinery, particularly for irrigation and cane-crushing purposes will considerably enhance the productive efficiency of the agriculturists and improve the quality and the quantity of the produce. The introduction of the Western type of costly agricultural machinery driven by motive power is not possible in India owing to the peculiar conditions found in our agricultural industry. The peculiar conditions of the cultivator require cheap and handy implements which are easy to understand, and in order to ensure full benefit from the improved implements, it is considered necessary that they should be manufactured in the country itself and full provision should be made for the supply of spare parts and facilities for repairs.

Large-scale Manufactures

Indian capital is regarded as timid, shy and conservative. But these epithets hardly apply to it in the present state of India's awakening when it has slowly but steadily found its way in modern industrial enterprises and tended to seek new channels. No doubt, owing to the paucity of competent managers and organizers of commercial

business and industrial enterprises and the lack of proper banking facilities in rural areas, the growth of capital is greatly retarded but it must be said that it is showing a remarkable development both 'in point of adequacy and venturesomeness,' especially since the War-period. That the Indian capital is shaking off its proverbial shyness is evidenced by the increase in government rupee loan, and in the paid-up capital of joint-stock companies registered in India. The fact is that people have now begun to realize the advantages of investment and if improved banking facilities on any extensive scale and competent entrepreneurs equipped with requisite experience and training are forthcoming, it will grow less and less timorous and it may be confidently expected that one day it will completely oust the dominance of foreign capital.

Cotton Industry

The first cotton mill was started in Calcutta in 1818 and the first mill in Bombay was established in 1854. Since then the industry has developed considerably in spite of occasional vicissitudes due to famine, plague, foreign competition, fluctuations in the foreign exchange and prices of cotton, etc.

The industry employs a capital of about Rs. 43 crores. The most satisfying feature of the industry is that it is mainly capitalised and managed by Indians.

In the initial stages of its growth the principal product of the cotton mill industry was yarn meant for the consumption of the handloom industry and for export to China. But owing to the decline of the China trade in yarn, the cotton industrialists concentrated their energies on the production of both yarn and cloth for home consumption. The progress of the industry during the Great War and since has been especially phenomenal. The Swadeshi Movement has also given a great impetus to the industry which has considerably advanced in spinning and weaving—specially of finer counts. Owing to the absence of fine American type of cotton, our industry is suffering a great handicap as it cannot manufacture fine-textured fabrics. Recently the keen competition of Japan in piece-goods has greatly

threatened the very existence of the industry. The Government of India owing to heavy depreciation of the rupee, levied a very high duty on cotton goods imported into the country.

Most of the cotton mills are found in the Bombay Presidency, the important centres of production being Bombay city and island Ahmedabad, Sholapur, Surat, Broach and Jalgaon. Calcutta, Delhi, Nagpur and Madras are other important centres of cotton mills. More than two hundred cotton mills working in the Bombay Presidency employ in all about 2,32,000 persons, the rest of the mills are distributed over many provinces and States.

Sugar Industry

'The arts of preparing, refining and crystallizing raw sugar have been practised in India from ancient times, but gradually India went on importing more and more sugar from Mauritius and Java.' The indigenous industry was hit hard by the foreign cheap sugar, but survived till now only due to the religious sentiments against the imported sugar. The Indian Sugar Committee of 1920 was of opinion that 'it should be perfectly practicable to produce the whole of the present import in India itself and that to the great benefit of India and indirectly to the rest of the Empire.'

Helped by an adequate tariff wall, the introduction of improved varieties of cane and the increase of area under cane cultivation, the industry has made phenomenal progress in recent years. There were 146 modern sugar factories in 1939-40 as compared to 82 in 1931-32, while import of sugar from foreign countries is estimated, say, to be 2,20,000 tons as compared to 9,01,000 tons in 1931-32. The total production of sugar in India was about 18,30,000 tons in 1939-40, while consumption of sugar in India during the same year was estimated to be 11,50,000 tons. Account has not been taken here of the estimated production of khandsari sugar of 1,50,000 tons and the Government estimate of sugar refined from gur of 32,000 tons. It is of interest to note that the production of gur is also increasing since 1931-32, when it was 2,77,2000 tons as compared to 5,275,000 tons in 1938-39.

Really speaking, the growth of the Indian sugar industry starts from the year 1930-31, when a duty of Rs. 7-4-0 per cwt. on imported sugar was imposed by the Government. This duty was further enhanced to Rs. 9-1-0 per cwt. in 1932. The total import duty including the surcharge became Rs. 9-4 per cwt. in 1937 and this was reduced to Rs. 8-12 with effect from 1st April 1940. With a view to check the rapid growth of the industry and in order to replace the loss of revenue from this source, an excise duty of Rs. 1-5-0 per cwt. on factory produced sugar and annas ten per cwt. on Khandsari sugar was imposed in 1934. In spite of a great opposition from all quarters, the Government increased the sugar excise duty to Rs. 2 per cwt. with effect from April 1, 1937; and further increased it to Rs. 3 from April 1940 while decreased the duty on Khandsari sugar to annas eight per cwt.

The United Provinces and Bihar are the most important cane producing centres in India, the former contributing about 50 per cent. and the latter about 25 per cent. to the total produce. The Bombay and Madras Provinces are also making progress in sugarcane cultivation.

A new fillip to sugar industry has been given by the Government on the 11th March, 1937 by formally opening the Imperial Institute of Sugar Technology at Cawnpore. It is intended that the Institute should undertake research on sugar technology, deal with the utilization of by-products, test the new varieties of cane and solve the general problems of sugar engineering and chemistry. Research work, with promising results, has been carried out on the utilization of molasses for the manufacture of cattle feed, road making, manure, the preparation of acetic acid and power alcohol.

There was a precipitate fall in the prices of sugar in 1937 when a Sugar Syndicate comprising of over 90 mills of Bihar and the United Provinces came into existence. This Syndicate has been given legislative recognition by the Governments of the U. P. and Bihar and all mills working in these provinces are compelled to sell their sugar through the body. These Governments have made it compulsory for every mill to obtain a license for working it and to become a member of the Indian Sugar Syndicate. During

for 70 per cent. of the investment. The industry is dominated by foreign capital and management. The factories for making finer woollen goods, import wool from Australia and Persia because the indigenous variety is rough and poor and is mainly suitable for the manufacture of blankets, rugs, carpets, and other coarse articles. The main causes why the mills have not rapidly multiplied are the limited demand for woollen goods owing to the hot climate excepting a few months in the year, the scarcity of raw wool of superior quality, and the importation of cheap woollen articles from foreign countries. The excessive imports of woollen goods amounting to six times the home production, show that there is a large field for the development of industry in India. Germany and Italy are serious competitors in woollen products.

Iron and Steel Industry

The iron and steel industry is confined to Bengal and Bihar and Orissa provinces, where iron ore and coal are found in close proximity. This industry is one of the 'key' or 'basic' industries and is of great importance in the modern industrial development of the country. The first successful concern namely, the Barakar Iron Works, which were taken over in 1889 by the Bengal Steel and Iron Company, were started in 1874 in Bengal on the Jherria coal-fields. This company succeeded in manufacturing pig iron and the attempts at steel manufacturing resulted in a heavy loss due to the cheap price of the imported steel. The next important stage in the growth of the industry was ushered in by the formation of the Tata Company. The Tata Steel Company was started at Sakchi (Jamshedpur) in 1908 with a capital of Rs. 2½ crores which was mainly Indian. Steel was manufactured for the first time in the country by the Tata Company in 1913, which is one of the biggest concerns in India and employs 30,000 workers. The heavy demand for rails, etc., during the Great War not only helped the enormous expansion of the Tata Works, but also led to the formation of several other companies such as The Indian Iron and Steel Corporation of Asia at Manoharpur, the Eastern Iron Company, and the Mysore State Iron Works at Bhadravati. The Tata Company manufactures about two-thirds of the whole

output of pig iron and almost the whole of steel made in India. But India is still dependent to a very considerable degree upon foreign iron and steel in spite of the heavy increase in production occasioned by the construction of new iron and steel concerns.

After the termination of War, the steel industry had to face such a fierce competition from the cheap imported steel that the Tata had to apply for protection to the Government. On the recommendation of the Tariff Board, the steel industry was given protection and bounty was also given for a short period on steel rails, fish plates and the railway wagons manufactured in India, but later on bounty was discontinued on the grounds that the industry needs protection for a much longer period of time and bounty involves a heavy expenditure. The war has created an extraordinary situation for the industry.

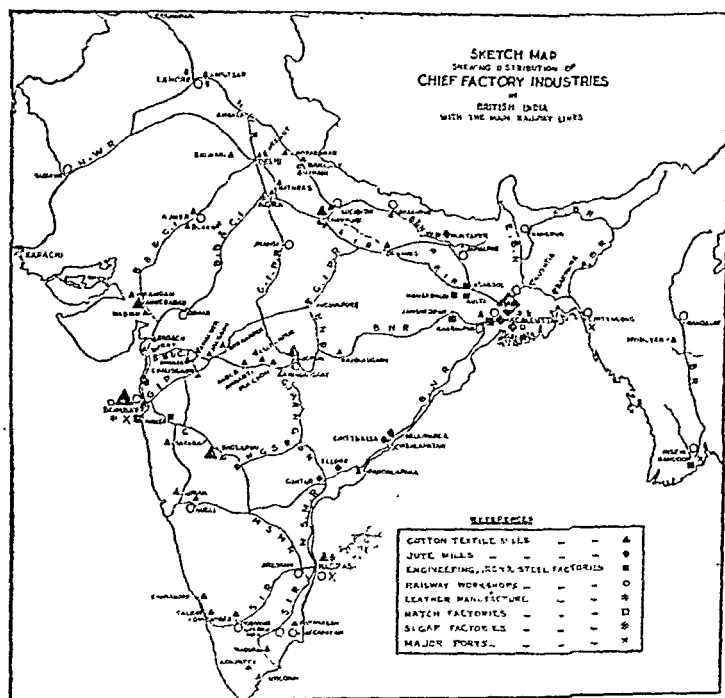
Tanning and Leather Industry

The tanning industry is very old in India. India possesses a vast supply of hides and skins, but previous to the War, these were mostly exported in a raw state to Germany, Austria, and the United States. The first initiative of modernizing the industry was taken up by the military authorities who introduced European methods of tanning to manufacture superior leather for military requirements. A Government Harness and Saddlery Factory was set up at Cawnpore which afterwards became the centre of the tanning industry. During the war, partly owing to the cutting off of the enemy markets and partly owing to the control exercised by the Government, the prices of the hides and skins fell enormously with this important result that many tanneries and leather factories came into existence with up to date machinery at Cawnpore, Agra, Madras, Bombay and Calcutta, manufacturing leather goods of all sorts. During the war the Indian Munition Board was set up to encourage the tanneries to produce superior type of leather for war purposes. Chrome process of tanning is becoming popular, but owing to the big cost of the machinery required for its equipment, it has made a very slow progress. In spite of the noteworthy progress achieved by the leather industry it still stands in need of proper organization and expert skill. We even now export large quantities of hides and skins.

only to get them back in the form of manufactured goods. Protection against foreign goods and duty on the export of hides and skins in order to discourage the export of the raw material to foreign countries will go to a considerable way in making India a self-supporting country as regards leather goods.

Match Industry

The real history of match industry in India dates from 1921, when the duty on imported matches was raised to 12 annas per gross and later on to Rs. 1-8-0 per gross for revenue purposes and which has been now converted into a protective duty on the recommendation of the Tariff Board. Formerly, we used to import annually large quantities of matches chiefly from England, Scandinavia and Japan, the latter contributing the greatest percentage.



There were only six factories in India before the War, but after the imposition of the duty they made an extraordinary

progress and rapidly multiplied in number. The imports of matches from Japan and Sweden have completely dwindled away into insignificance. The industry is fairly in a prosperous state. There is no dearth of raw material, but owing to the inaccessibility of such timbers as spruce and silver fir, which are most suitable for the match industry, the cost of transportation is very high. In order to avoid this disagreeable position, it has been suggested that splint factories should be started and adequate facilities should be provided for the transportation of the splint to the centrally situated factories in the plains. One alarming feature of the industry is that it is dominated by a foreign syndicate "The Swedish Match Company" which has started a few big industries in India and begun to kill unscrupulously the minor factories of the country. A great hue and cry was raised against the unscrupulous attitude of the Swedish Trust but the Tariff Board regarded the establishment of Swedish Company's factories as of "distinct economic value to the country because of the high standard of quality at company's factories and of the training afforded to Indians in these factories in improved methods of match manufacture."

Paper Industry

Paper-making is an old industry of India, and is still carried on in certain parts of the country by indigenous methods. Early attempts at manufacturing machine made paper proved abortive. Machine-made paper began in India with the establishment of the Bally Paper Mills on the Hoogly in 1870. The Titagarh Paper Mills were started in 1882. Previous to the War, the industry was in a very unstable condition owing to the severe foreign competition. But with the commencement of the War the Indian Paper Industry has been showing a good progress and it is hoped that with the impending mass spread of education the industry has a great future before it. At the present time the existing paper mills in India are producing only 40,000 tons—about one-fourth of the total consumption which comes to about 1,60,000 tons a year. In India paper is mostly manufactured out of sabai grass, bhabhar grass bamboos, rags, hemp, waste-paper, gunny bags and old ropes. The Indian paper is of a very poor

quality ; for manufacturing superior quality of paper the Indian paper mills import wood pulp from abroad. Manufacture of paper from bamboo, the supply of which is practically inexhaustible, promises vast opportunities for the development of the industry. Owing to the severe foreign competition from Scandinavia and Germany the paper industry applied for protection. In 1925 a protective duty of one anna per pound was levied on imported paper as proposed by the Tariff Board for seven years so as to secure a firm basis for the industry. The War has brought about nearly a total stoppage of paper imports and has put a heavy strain on the existing paper mills in India. The price of paper has gone up very high. To meet the situation the Government of India is controlling the supply and the price of paper and is asking all the consumers of paper to observe the utmost economy of paper.

Glass Industry

Brief History. That glass manufactures were known to, and in use in, India in the early Christian era is now well established by the recent archeological discoveries and excavations.

In the 17th century, it is known that enamelled glass was manufactured in India though the industry was producing glassware of very poor quality, mostly confined to bangles and to a smaller degree, small bottles and flasks.

In the nineties of the last century some glass factories of the modern type were established and a glass factory at Talegaon in Poona District had done much for the industrial development of glass manufacture but most of these factories met with failure.

The 1906 Swadeshi Movement gave a fresh impetus to this industry as well and in spite of the obvious failures experienced in this branch of production by the enterprisers, more and fresh enterprises were launched. These early failures were more mainly attributed to the lack of adequate technical skill, ignorance about the qualities of raw material and the peculiarities of local conditions.

Between 1908 and 1913, 16 new glass factories were launched but with very little success. But during the Great War the Indian Munitions Board gave encouragement to the manufacture of glassware in India and the industry began to show steady signs of recovery and definite improvement.

After the termination of the Great War, the import duty on glass manufactures was increased from 15% to 30%, as a result of which the industry received a stimulus and 22 new factories came into existence during this period.

In 1931, the Indian Tariff Board carried investigations into the prospects of glass industry and recommended protection for the industry for a period of ten years. The recommendations of the Board were not accepted by the Government of India which no doubt led to a great disappointment and unrest among the glass manufacturers.

At the present time, the distribution of glass factories in the various provinces is as follows —

88 in the United Provinces, 28 in Bengal, 19 in Bombay, 3 in Punjab, 1 in Madras, 1 in Delhi and, 11 in the States.

Raw Materials for the Industry

The important raw materials used in the manufacture of glassware are sand, soda ash, lime or lime stone, the percentage of soda ash being the largest. Though the protection could not be given to the glass industry, the Government of India reduced the duty on soda ash imported for the consumption of glass factories and thus materially contributed to the reduction of costs in the glass manufactures. The other raw materials which are required for the manufacture of glassware are found in the country in abundance.

Classification of Glass Industry

Two distinct categories of glass factories exist side by side at the present time—

- (1) the indigenous cottage industry.
- (2) the modern factory industry.

The cottage industries are found at many places in India but they are mainly located in the Firozabad district of the United Provinces, in the Belgaum district, Bombay, and also to a smaller extent in the Mysore State. The artisans get from the glass factories glass blocks or cakes and make in their own small furnaces bangles for local consumption in India. Cottage industries in India have wonderful capacities to stand tenaciously against the murderous onslaughts of cheaply manufactured machine-made goods and the same applies with equal force to glass cottage industry. In spite of the severe competition from the glass factory industry in India and specially from Japan, the cottage industry has survived the blow admirably and it is now supplying more than one-third of the total requirements of the country.

The Modern Glass Factory though still in a semi-developed stage is making steady and satisfactory progress in the production of glass cakes for bangles, beads, bottles, lampware, phials, tableware etc. Some factories have recently started manufacture of surgical and laboratory requirements in glass. Sheet and plate glass, plain as well as ornamental, is also being manufactured.

Imports and Exports

It is a very satisfactory feature to note that import figures are gradually decreasing owing to larger production of glassware in India. Whereas the total imports in 1926-27 amounted to Rs. 2½ crores the value of total imports in 1939-40 fell down to Rs. 1½ crores only.

According to conservative estimates, the total annual production of glass and glassware at the present time comes to about Rs. 2 crores. More than half of the demand of the country is now met with by the Indian Glass Industry and the value of imports has now come down to one-half of the figure that stood in 1925.

Just as in the last Great War, the glass industry received impetus inasmuch as large supplies were delivered to the Indian Munitions Board, similarly in the present war too, the glass industry is receiving large orders from the Supply Department for defence require-

ments and the industry is coping with the additional burden thrown over it in an admirable manner. With Japan's and Czechoslovakia's supplies absolutely cut off during the period of hostilities, it is anticipated and earnestly hoped that Indian Glass Industry will attain its full status by making rapid strides in all directions and be able to put itself on a firm footing by capturing other markets as well.

United Provinces in the Vanguard

Among the Provinces of India, the United Provinces occupies a very important and conspicuous place in the production of glassware. Besides the famous Firozabad Industry which is primarily engaged in the production of bangles from glass cakes or blocks made in bigger factories, there are important glass factories working in full order at Bahjoi and Naini. The United Provinces has the rare and enviable distinction of possessing a glass factory at Bahjoi which alone produces sheet glass in the Continent of Asia except Japan. One of the important recommendations of the Tariff Board was the establishment of a Technical Research Institute for glass in order to carry out investigations into glass Technology in India. The United Provinces took the opportunity by the forelock and have created a special Department of Glass Technology under a well known Technologist at Benares with a view to develop this industry especially in the direction of reducing the cost of glass manufacture and putting the whole industry on a scientific basis by devising modern methods of manufacture. As a result of these technological improvements and the expert advice rendered by the Glass Technologist to the glass manufacturers new types of glass are now being manufactured such as laboratory ware, rods and tubing, pipes and a variety of other articles which were hitherto imported from foreign countries.

In addition to these, there are other industries such as cement, chemicals, petroleum which, from the industrial and economic points of view, are of considerable importance. Small flour mills are found in Bombay, the Central Provinces, Madras, the Punjab, and the United Provinces. Rice husking mills are mainly situated

in Burma, Madras and Bengal. Tea industry is mainly centred in Assam and it is purely financed and managed by Europeans.

MEANS OF COMMUNICATION AND TRANSPORT

The importance of the means of communication and transport in the intricate and interdependent economic organization of the modern times can scarcely be over-emphasized. Transport is an essential link in the industry and the commerce of the world. Industry, commerce and transport are bound up together for the development of one leads to the development of the other ; industrial and transport developments have to go side by side. With a rapid increase in the speed and security of transport, distance is annihilated and geographical disadvantages are neutralized with the important result that more and more distant markets enter into the field of competition leading to an equalization of prices. Even from the military, administrative and social points of view their importance is no less remarkable. For the growth of civilization cheap and quick transport facilities are the essential requirements in modern times. Of course no modern complex civilization could develop without the efficient system of transport industry which ranks second to none but agricultural industry in the world.

As late as the middle of the nineteenth century India was deficient in its improved facilities for transport and communication. For transport purposes, pack animals such as mules, yaks, horses, camels, bullock carts, palanquins, small river crafts and little sailing and coasting vessels, were ordinarily used. With the advent of the British, a complete revolution has been effected in our transport system, internally as well as externally. Although much has been accomplished in the way of improved system of transport, a huge amount of capital to make the present system most efficient and up to date is immediately required.

Road Transport

With the growth of political power and expansion of territories, the British administration in India realized the

need for improved means of communication. It was only in 1839 that real attempts were made to connect Delhi and Calcutta by a proper metalled road. However, in Lord Dalhousie's time a vigorous policy was pursued regarding road making. The extension of the railway system also increasingly necessitated the construction of roads to feed the railways. Under the Reforms of 1919 roads were included in the list of transferred subjects in all the provinces except Assam. In pursuance of sudden and rapid growth of motor traffic the Indian Road Development Committee was appointed in 1927, to examine the desirability of developing the road system of India, the means by which such a development could be most suitably financed, and to consider the formation of a Central Road Board for the purpose of co-ordinating the policy of road development in India.

As a result of the recommendations of the Committee and their acceptance by the Government of India, the duty on motor spirit was increased from four to six annas per gallon and the proceeds of the additional duty of two annas per gallon have been credited to a separate Road Development Account, out of the total receipts realized from the additional duty, 10 per cent of the amount is retained by the Central Government as a reserve for the administration of the fund, for research and experimental works, etc., the remaining, viz., 90 per cent is distributed to the provinces and States in proportion to their petrol consumption. From the reserve grants are also made by the Government of India to the provinces and States on some specified conditions, for example, for projects beyond the resources of the local Governments or those that concern more than one province or State or those that are of all-India importance. The Road Development Account which was set up in the first instance for a period of five years has been extended from 1934 without any restriction of time. But it is now being increasingly realized that the fund available for road development is too inadequate and at this rate the development will be too slow.

The total road mileage of metalled and unmetalled roads amounts approximately to 2 lakhs and 20 thousand

miles which is not very adequate considering the requirements and the immensity of the country. Most of the roads are not served with any permanent system of bridges as a result of which considerable traffic is held up during rainy seasons.

Rail-road Competition

With the advent of motor-transport in India, during the last decade, the importance of roads has begun to loom large in the eyes of the public and the Government. The far-reaching potentialities of motor-transport for the commercial exploitation of the rural areas are beginning to be realized. The recent development of motor passenger transport is appreciated as bringing the facility of rapid conveyance within easy reach of ordinary peasants who can be picked up or set down at any point along the route in rural areas. For relatively lighter traffic and for short distances, the motor traffic scores over its competitor—the railway. In rural areas where the population is scanty and scattered, the construction of a railway would be an uneconomic proposition while motor traffic can provide all the facilities with minimum of expenditure.

The rural motor bus service (a) opens up country-side, (b) provides better facilities to agriculturists for marketing agricultural produce, (c) eliminates all the inconvenience, time and heavy expense involved in a journey between the villages and towns, (d) stimulates the poultry-farming and the cultivation of other lucrative vegetable products, (e) helps to improve the amenities of rural life, and (f) prevents rural depopulation.

In India, owing to the absence of metalled or unmetalled improved roads in rural areas, the motor traffic is mostly concentrated on the metalled roads running parallel to half the total railway mileage, thus proving a serious rival to the railways. As a result of the motor competition railways are losing about 2 per cent. of the earnings of a normal year. As yet the motor competition is confined to passenger traffic for short distances only with the exception of the North-Western Railway which has suffered in the carriage of merchandise also. We admit that in some cases motor competition has stimulated

the railway authorities to make improvements and provide better facilities, but it must be said that this cut throat competition is not in the best interests of the country and, more so, when we consider that railways are the property of the Government of India and hence of the tax payers. The policy should be for the mutual benefit of both to make roads as feeders rather than competitors of the railways.

Construction of good roads in the outlying areas coupled with the systematic organization of motor traffic will go a long way in eliminating the wasteful competition between the railway and the motor traffic. Pioneers also should be encouraged to operate rural transport services by granting some sort of monopoly, subject, of course, to adequate safeguards as to the quality and the sufficiency of the services they provide. It will prevent over crowding over more lucrative and heavily-trafficked roads, open up subsidiary country routes and will bring many social and economic advantages to the rural parts.

The Present Position

Despite the substantial and praiseworthy improvements in road transport, India still remains a very backward country in respect of roadways. There are four great trunk roads stretching diagonally across the country. Among them the oldest and the most famous is the Grand Trunk Road which runs from Calcutta to Peshawar, others from Calcutta to Madras, Madras to Bombay, and Bombay to Delhi. But none of them is up to the modern standard. Owing to the lack of bridges and crossings, much of the traffic is held up in the rainy season.

Roads have been classified as (a) arterial or main roads, that is, roads which are maintained by Provincial revenues and which traverse from province to province, (b) feeder or subsidiary roads which are maintained by district boards and connect rural areas with the railways or the main roads, (c) the village roads which are *kuchcha* or unsurfaced roads maintained by local boards.

The village roads are hopelessly poor in quality, no appreciable attempts have been made to improve their condition. The policy should now be to improve and

develop rural communications instead of trunk roads. The development of rural communication is indispensable as all the advantages of the improved arts of cultivation get neutralized in the absence of better roads. Their importance can be realized when we recall to the mind that it is only through the want of communications that about 5 million acres in Assam await colonization. It is only through special grants to Local Boards for spending on rural communications that substantial results can be achieved. The remarks of the Indian Road Development Committee are very telling : "...all communications are interdependent. The value of a village road is small unless it leads to a main road, which leads in turn to a market or a railway. On the other hand, the full value of a railway is not realized, unless it is fed by an adequate system of main and subsidiary roads. The orderly development of all communications should proceed together." In any new programme of roads going to be planned in the near future, the all-important question of providing marketing facilities to outlying rural areas should receive the foremost consideration at the hands of the authorities concerned. A good network of road system connecting the urban and rural areas will give a tremendous fillip to agriculture, trade and the industry of the country.

Railways

It was in the time of Lord Dalhousie in 1854 that a definite policy was adopted for the construction of railways in India. In the beginning the Government guaranteed a free grant of land and 5 per cent. rate of interest on capital invested by the British capitalists. But the Government suffered a great financial loss, as there was no incentive to economy on the part of the companies. In 1869 the railway construction was undertaken by the direct Government agency but in 1879 due to financial stringency, the Government was compelled to have recourse to company agency again but on terms more favourable than under the old guarantee system, and in the new form of guarantee system, the proprietorship rested with the Government and not with the company which constructed the railway. The Government

also reserved the right to purchase the company lines after a certain period at specified rates. In 1900 the railways in India began to show profits and a vigorous policy was pursued in the extension of the railways. As a result of the recommendations of the majority of the Acworth Railway Committee (1920-21) the Government has decided directly to work the lines now managed by the companies on the termination of their contracts.

The total mileage under the railways comes to about 41,156 on March 31, 1940 and the total invested capital amounts to Rs 852 crores. There are some railways which are both State-owned and State worked such as N W Railway, E B Railway, E I Railway, and G I P. Railway. Some others, although owned by the State, are worked by the companies enjoying a guarantee of interest from the Government, e.g., B N Railway, B. B. and O I Railway, etc., while there are others which are company-owned and company-managed. The gauges of the Indian Railways were in 1939-40 — (i) the standard or 5 ft. 6 inches (21,154 miles), (ii) the metre, or 3 ft. 3½ inches (15,899 miles) and (iii) the narrow gauges of 2 ft 6 inches and 2 ft (4,103 miles). The general policy of the railway system in India is conducted by a body known as the Railway Board under the Department of Commerce.

Advantages of Railways

Railways have greatly revolutionized the methods of transport and brought about many political, social and economic changes in the life of the people.

(1) *Political* Railways have greatly helped to unite together the people of this vast sub-continent having different creeds, caste and traditions into one centralized system of administration. The sense of nationality has been born instead of the disruptive tendencies that prevailed among the different sections of society in the pre-railway period. Any disorder or insurrection within the country or on its frontiers can be easily suppressed by the rapid mobilization of troops to the affected parts. Thus railways have been instrumental in establishing peace and security in the country which was, before their introduc-

tion, torn by incessant wars and overrun by plundering raids.

(2) *Social*. The old village isolation and self-sufficiency is breaking down; and in spite of the fact that caste rules are still maintained, the 'compulsory rubbing' of shoulders in front of the booking offices and within a carriage must bring home the idea of the hollowness of the institution. The social outlook is broadened and people have grown more tolerant and sympathetic towards one another.

Pilgrimages to various Hindu shrines which were formerly expensive, tedious, difficult and even dangerous have now become too cheap, safe and comfortable.

(3) *Economic* The economic advantages accruing from railways are very important from the point of view of industrial and commercial development of the country and some of them have been summarized below :—

(a) Cheap, easy and rapid means of transportation have encouraged travelling and considerably helped the movement of population from congested areas to places which are sparsely populated and where labour alone is needed to make the soil yield good harvests.

(b) The improved means of communication have led to the equalization of prices throughout the country as well as their conformity with the world prices.

(c) The cheap and rapid transport has greatly helped to mitigate the horrors and severity to famines by transporting food grains from the areas of abundance to the famine-stricken areas. Moreover, people can move to other places in search of employment in lean years.

(d) With the advent of railways, the character of agriculture is also changed. Agriculturists are drifting from the subsistence type of farming to the commercial type of farming, as the latter system of cultivation is more remunerative. Formerly, every village generally used to grow all sorts of crops required by its people, but now villages and tracts tend to specialize in those crops for which they are best suited, and to get other necessary products for their consumption by exchange.

(e) Railways have stimulated the growth of manufac-

turning industries by facilitating the transport of coal and raw materials and by distributing finished goods

(f) They are an essential adjunct to internal and external trade. Even the most remote village enjoys the articles produced in the most distant countries

(g) The railway industry is in itself a very big industry and the total number of people employed by the railways in India amounts to a million

(h) Government revenues benefit both directly and indirectly, directly because railway profits are an important source of Government revenue, and indirectly because as a result of the development in the means of communication trade develops, industries get stimulated, land values tend to increase—all leading to an increase in the total wealth of the country and consequently in the taxable capacity of the people

Disadvantages

Railways are, however, not an unmixed blessing to the country

(a) Railways have killed many indigenous industries by affording better facilities to the import of foreign goods, and increased the ruralization of the country. The railway rates were so manipulated as to encourage traffic to and from the ports, thereby, encouraging the export of raw materials and the import of foreign manufactures

(b) If railways have helped the growth of towns, they have also led to the congestion of industries in the port towns and are responsible for much of the insanitary conditions and high rates of mortality

(c) With equal rapidity they transport the contagious diseases which play a great havoc in the country

(d) Railway construction has interfered with the natural drainage with this consequence that water-logged areas are found on both sides of the lines, which are the breeding-places of mosquitoes. It must also be said that owing to the lack of bridges or culverts the free flow of water in times of flood is greatly obstructed to the great detriment of the surrounding areas

(e) It is also said that they have made people more luxurious and ease-loving, and they do not now think it worth while to walk on foot even for short distances. The cheap importation of foreign luxurious articles in the market has made them more fashionable.

But it is worth remembering in this connection that some of the defects mentioned above are not inherent in the railway system and are preventable. No doubt, the railways hastened the extinction of the national industries of India to the utter ruination of the Indian craftsmen by bringing the competition of cheap machine-made goods to their very door, but the defect lies not so much in the railways as in the railway policy manipulated by the administrators. Again, to speak that the railways have rendered the climate of the country more malarious is not justified because in many instances the natural drainage of the land has been violated through sheer lack of engineering knowledge.

Waterways

Water transport is many times cheaper and possesses many advantages over road and rail transport. Firstly, the huge cost of laying out rails over land, the construction of stations and other necessary equipment and, therefore, the maintenance of a huge array of railway staff is conspicuous by its absence in the case of water transport. No doubt, a small capital outlay is involved in providing terminal facilities such as docks, wharves and warehouses, but it is proportionally much less than the cost of similar provisions incurred in rail transport. Secondly, water transport is more suitable in the carriage of large and bulky goods. In spite of all these advantages, however, water transport has lost its grounds in regard to inland trade.

It is amply proved by the historical records that India played a considerable part in the sea-borne trade in ancient times and carried foreign trade in sailing-vessels with many countries of the East and West. A brisk coastal trade was also maintained between the sea-port towns. Inland waterways were also used as highways for merchandise and passenger traffic. Until the advent of

the British and long afterwards, India had a flourishing ship building industry

But the advent of steamships and the opening of roads and railways in India sounded, so to speak the death-knell of the Indian Shipping Industry and threw out of use almost all the inland waterways of the country. In Northern India, we have many navigable rivers. It is estimated that there are about 26,000 miles of navigable waterways in the great river systems of Northern India. The Indus, the Ganges, the Brahmaputra and the Irrawaddy and their tributaries are the chief means of inland water transport. Steamers can navigate in these rivers for the greater part of the year for hundreds of miles above their mouths. But the development of railways and their keen competition has greatly reduced the volume of traffic, both passenger and merchandise, through waterways. Inland steam navigation is now confined mainly to the Brahmaputra, the lower reaches of the Ganges, and the Irrawaddy including some of their territories. In the Peninsula, the rivers are, however, not fit for navigation purposes owing to their rocky beds and torrential flow during the rainy season. With regard to the foreign sea borne trade, it is entirely in the hands of the foreign shipping companies. The coasting trade between seaport towns is carried on mainly by a few large British navigation companies. It has been estimated that the share of Indians in the coastal trade amounts to 13 per cent the rest being appropriated by the foreign companies. The important seaports of India are Karachi, Bombay, Goa, Madras, Vizagapatam, Calcutta, Chittagong and Rangoon.

IRRIGATION

A Paramount Necessity

In order to avert the unforeseen consequences of drought, the question of providing suitable irrigation facilities to the agriculturists assumes an attitude of utmost importance. In the first instance, the Indian rainfall is very unevenly distributed over the country, e.g., the normal rainfall is 460 inches at Cherrapunji in Assam and less than three inches in Upper Sind,

where cultivation without irrigation is impossible. Secondly, where the rainfall is not so very scanty, it is uncertain and ill-distributed as in the uplands of the Deccan which are exposed to chronic drought. Thirdly, some valuable crops such as cotton, and sugarcane cannot be successfully grown without a constant supply of artificial water. Fourthly, owing to the seasonal character of the rainfall, double-cropping requires artificial irrigation in the absence of winter rains. Lastly, in view of the overwhelming preponderance of the agricultural population, the freakish nature of our Monsoons and the dry and porous nature of the Indian soil, it is a question of vital importance to see that regular supply of water is maintained in order to save agricultural industries depending upon it from ruin. Irrigation has been practised in India from time immemorial, specially in the forms of wells and tanks to make agriculture independent of deficient rainfall, and the British contribution to the irrigation system consists in the large irrigation works constructed for the purpose of utilizing the surplus water of the big rivers.

Classification of Irrigation Works

Irrigation works of all kinds may conveniently be divided into three great types, viz., lift, storage and river works and are represented respectively by wells, tanks or reservoirs and canals.

(1) *Well-irrigation or Lift Works.* Wells occupy a very important place in our irrigation system and irrigate about 25 per cent. of the total irrigated area in India. Wells are a private enterprise but the Government has systematically encouraged well-irrigation by advancing Taccavi loans. Different varieties of wells are to be seen in India. They may be just holes in the ground, sunk to sub-soil level, used for a year or two and then allowed to fall into decay, or they may be lined with timber or with brick or stone. Well-irrigation is mostly found in the Punjab and the United Provinces because the geographical conditions are very favourable in this region for sinking wells. The method of lifting water varies in different parts of the country. The following are the more popular

means of raising water from a lower level to that which will command the area to be irrigated

(a) The *Dhekli* system is a crude contrivance for raising water, it consists of a long pole working on a post and weighted commonly with compact mass of mud at one end, and a bucket attached by a long rope to the other one. The water is raised in small quantities and the process is very weary and monotonous. Vegetable growers especially in suburban areas adopt this method with great convenience and economy.

(b) The *Boli* system, in which two men stand on opposite sides of the water pit holding the strings attached to a flattened out leather basket, and throw water from a low level to a high one.

(c) The *Charsa* system—Charsa, which goes by different names, is a big leather bag which can contain about 30 to 40 gallons of water—in which cattle energy is utilized to draw water and one man stands at the mouth of the well to empty the leather bag and the other of course guides the bullocks. This system prevails mostly in the United Provinces and the Punjab, well constructed and goodly-sunken wells are the chief requirements of this system.

(d) The *Peison Wheel* is used most profitably and economically in those parts where the level of the sub soil water is fairly high and the underground water is abundant. It requires less of labour and more of capital than the former system.

(e) The utility of wells has been considerably increased by the sub-artesian bores and the installation of small electric power pumps. A new vista is likely to open in our irrigation system with the introduction and cheap distribution of hydro-electric power in rural areas. Recently the U P government has undertaken the work of installing small power pumps in most of the districts of this province.

(2) *Tanks and Storage Works* Next to the wells the indigenous instrument of irrigation is the tank. Village tanks or large artificial lakes, called storage works, are formed by the construction of dams across drainage lines, for

storing the supply of rain-water for subsequent uses. These tanks vary in size from a great work like Lake Fife and Whiling in the Bombay Presidency or the Periyar Lake in Travancore State holding up colossal quantities of water and spreading their waters through great chains of canals to the little village tank irrigating scarcely ten acres. Tank-irrigation is mainly found in the Deccan. Madras alone possessing about 40000 tanks irrigating about three million acres of land. Tanks are not found in Sind, the Punjab and the United Provinces. The Native States of Rajputana, Central India, Hyderabad and Mysore have undertaken the construction of huge lakes for irrigation purposes. The famous State of Udaipur has the most magnificent Lake (Jaisamand), one of the biggest artificial lakes in the world, which has an area of 45 square miles. In Mysore, the "Krishna-Rajasagar Reservoir" called after the name of the present Maharaja has been constructed. In Hyderabad, the Osman-Sagar, one of the biggest storage works, has been recently constructed. The total area irrigated by storage works is about 8 million acres, but in many cases the supply is extremely precarious. The chief defect of minor storage works is that they generally run dry when they are most wanted—that is, during a drought.

(3) *Canals*. Canals are by far the most important methods of scientific irrigation and are mainly the product of the British rule although our Hindu and Muslim sovereigns are also known to have undertaken the construction of some canals. Owing to the constant recurrence of famines in one part or the other due to droughts and the consequent misery of starvation of the agriculturists, the Government launched a very enthusiastic policy of canalizing the tracts exposed to precarious rain-falls.

Canals may be divided into two classes, viz., Inundation and Perennial. The inundation canals are constructed by cutting shallow channels in the river banks; irrigation of the fields by this system can only take place when the river is in its flood, as with the rise in the water level of the river, the water will flow into these channels. These canals are to be found mostly in Sind and in some tracts

of the Punjab but they afford a precarious supply of water. Perennial canals are, however, constructed to obtain an assured supply of water by building a strong dam or anicut across an even flowing river, and diverting its water by means of a canal to the area to be irrigated. Within this class fall the great perennial systems of the Punjab and the United Provinces.

From the financial point of view the irrigation works (constructed by the State) may be classified into two classes, viz., Productive and Protective (or unproductive) works. Productive works are those, the capital cost of which has been wholly or mainly provided out of loan funds or by appropriation from the Famine Insurance Grant and which are expected to yield within ten years of their completion sufficient revenue to pay their working expenses and the interest on the capital expended on their construction. Most of the largest irrigation systems in India belong to the productive class. But from 1900 onwards, as a result of the recommendation of the Famine Commission of 1901, the Government began to construct protective works, not directly remunerative, but which would ensure protection against famine for the areas where rainfall is precarious. Protective works are those which are designed as a protection against famine and the cost of which is provided out of the current revenues of the Government or from the annual grants set aside for famine relief and insurance. Even these protective works may after some time become productive, if large areas of land come under cultivation.

There has, during the last 50 years, been a steady growth in the area irrigated by the Government irrigation works. From 10½ million acres in 1878-79 it has risen to, excluding Indian States, 31½ million acres. It is expected that with the proper working of all the irrigation projects which are now under construction, the total irrigated area in British India will amount to 40 million acres.

Since the introduction of the Montagu Chelmsford Reforms in 1919, irrigation has come under the control of the Provincial Governments and from 1921 onwards a remarkable activity has been displayed in the construction

of irrigation works, some of which have been completed while others are yet under construction. Some of the more important recent projects which are calculated to confer real benefits upon the agricultural industry of India may be mentioned here.

—(a) *The Sukkur Barrage and Canals Scheme.* A stupendous barrage, measuring about a mile in length with 66 spans provided with steel gates, has been constructed across the Indus a little below Sukkur. It is one of the marvellous feats of engineering skill and is considered to be the greatest work of its kind in the world. Out of this huge reservoir seven main canals (three on the right and four on the left-hand side of the barrage) have been taken out to distribute the water of the river over an area of 8 million acres, a tract which was partly a desert, but in course of time will be one of the richest granaries of the world. The whole scheme costs about Rs. 20 crores and the total length of the main canals, branches, distributaries and minor canals amounts to over 6,400 miles. All the canals of the Sukkur Barrage System will irrigate nearly $5\frac{1}{2}$ million acres of land every year and of this about $2\frac{1}{2}$ million acres has come under cultivation for the first time. The scheme has brought about a vast change in the agricultural industry of the province, which hitherto was dependent upon the precarious rainfall.

(b) *The Sutlej Valley Works.* This is another great irrigation project which reached completion by the end of 1932-33. Before the canalisation of the Sutlej on each bank of the river both in the Punjab and in the Indian States of Bhawalpur and Bikaner in the south, there existed a long series of inundation canals which could get the water from it in flood times. There was no proper method of controlling the water supply, with the consequence that in times of deficient rainfall, many tracts felt the pinch from want of water and their crops withered away before the time of maturity to the great detriment of the peasantry. To avoid this uncertainty of water supply the Sutlej Valley Project was undertaken.

The Project consists of four weirs, three on the Sutlej and one on the Punjab, as the Chenab is called below its junction with the Sutlej. The total area to be irrigated

Irrigational Works Conditioned by Natural Factors

We have seen that in India for the successful cultivation of crops, means of irrigation are indispensable. Now, we have to see how far the natural causes in India determine the system of irrigation. Certainly, the geographical factors play a very dominant part in determining the suitability of the irrigation system for a particular tract. We have already referred that canals are mainly found in the Punjab and in the north western districts of the United Provinces, wells in the remaining part of the northern plains and in Central India, and tanks in the Plateau of the Deccan.

The Indo Gangetic Plains are specially favourable for canal irrigation. Owing to the flat surface and soft alluvial bed of the Indo Gangetic Basin, the numerous snow fed rivers which command a perennial supply of water, and heavy density of population in rural areas, canal construction has been found most convenient and distribution of water most economical. In densely populated tracts there is a less likelihood of running water to waste because of the even distribution of water.

Well system is suited to those areas where the level of the sub-soil water is fairly high, the sub soil water abundant and the soil is not rocky. In places, where the sub soil water level is deep, it is not an economic proposition to irrigate agricultural crops, viz., in the sandy deserts of Rajputana where the depth is sometimes as great as 350 feet, it is too costly to lift water. Rocky beds also prevent digging of wells. In the Deccan Tableland, the rocky nature of the soil and the existence of the sub soil water at great depths prevent an ordinary cultivator to sink a well for irrigation purposes. Many thousands of acres lie in a state of wilderness because of the want of proper system of irrigation. In the United Provinces, the Eastern Punjab, Bihar and Orissa and Western Bengal, well irrigation is more economical and efficient because of the soft bed and moderate rainfall.

There are many reasons why tank-irrigation is so prominent in the Deccan. The first explanation lies in the peculiar configuration of the soil. The undulating character of the region, together with a rocky bed makes

Area irrigated by canals and the value of crops raised

Provinces	Net area cropped	Area irrigated by Canals*	Cost of construction of Government Canal	Estimated value of crops raised with the help of Government Canal
	In lakhs of acres	In lakhs of acres	In lakhs of rupees	In lakhs of rupees
Madras	389	74	2001	3113
Bombay	258	3	1063	180
Sind	49	47	2913	697
Bengal	285	4	529	22
U. P.	353	3.7	2590	1212
Punjab	344	113	3430	3068
Burma	182	21	671	482
Bihar and Orissa	291	8	628	331
Central Provinces	210	3.5	683	88
Rajputana	4	29	36	6
Baluchistan	4	2	36	4
N.W.P.... ..	26	3	297	113
	2395	310.39	14877	9316

* Excluding Indian State Canals

(e) In the Bombay Presidency the Bhandadara Dam, 270 feet in height, and the Bhatgar (Llyod) Dam have been respectively completed in 1925 and 1926, which are designed to supply water to the canals irrigating the valleys below these lakes. As a result of these schemes waste lands have been converted into areas producing luxuriant crops.

(f) In Bengal, the Damodar Canal had begun in 1926-27 and will, when completed, irrigate 200,000 acres of rice land, in the Burdwan and Hoogly districts. The Barakeswar Canal in Birbhum is also under construction and will, when completed, be able to irrigate 10,000 acres of land in a tract subject to occasional droughts.

is 51,08,000 acres or nearly 8,000 square miles, of this 20,75,000 acres are perennial, 30,33,000 acres non-perennial irrigation, 19,42,000 acres are in British territory, 28,25,000 acres in Bhawalpur and 341,000 acres in Bikaner. The total cost amounts to about Rs 33.31 crores, a portion of which has also been contributed by the States of Bhawalpur and Bikaner. The importance of this project in the economic position of those territories cannot be over emphasized because a large tract of desert waste has become available for colonization and sale, and been brought under cultivation for the first time.

The entire Punjab plain possesses a magnificent system of canals and water channels. The Western Jumna Canal irrigates the south east of the plain, the Sirhind Canal also waters the south-eastern plain. The Upper Bari Doab Canal, the Lower Chenab Canal, the Lower Jhelum Canal, and the famous Triple Project or the Upper Chenab Lower Bari Doab Canal System are other noteworthy works which have helped in increasing the productivity and prosperity of the Punjab.

✓ (c) *The Sarda Oudh Canals* To irrigate the north western districts of Oudh and some tracts of Rohilkhand, the Sarda was canalized and the scheme was put into regular service in 1929. The project, as a whole, contains 650 miles of main lines and 3600 miles of branches and distributaries which irrigates about 1.7 million acres.

✓ (d) *The Cauvery Reservoir Project* On the Cauvery at Mettur, a large dam is being constructed, which will impound over 90,000 cubic feet of water. On the completion, the project through a canal of 88 miles long will irrigate a new area of 301,000 acres and will improve the water supply for an area of a million acres. The scheme will cost Rs 6½ crores.

Area irrigated by canals and the value of crops raised

Provinces	Net area cropped	Area irrigated by Canals*	Cost of construction of Government Canal	Estimated value of crops raised with the help of Government Canal
	In lakhs of acres	In lakhs of acres	In lakhs of rupees	In lakhs of rupees
Madras	389	74	2001	3113
Bombay	258	3	1063	180
Sind	49	47	2913	697
Bengal	285	4	529	22
U. P.	353	3.7	2590	1212
Punjab	344	113	3430	3068
Burma	182	21	671	482
Bihar and Orissa	291	8	628	331
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Irrigational Works Conditioned by Natural Factors

We have seen that in India for the successful cultivation of crops, means of irrigation are indispensable. Now, we have to see how far the natural causes in India determine the system of irrigation. Certainly, the geographical factors play a very dominant part in determining the suitability of the irrigation system for a particular tract. We have already referred that canals are mainly found in the Punjab and in the north western districts of the United Provinces, wells in the remaining part of the northern plains and in Central India, and tanks in the Plateau of the Deccan.

The Indo Gangetic Plains are specially favourable for canal irrigation. Owing to the flat surface and soft alluvial bed of the Indo Gangetic Basin, the numerous snow fed rivers which command a perennial supply of water, and heavy density of population in rural areas, canal construction has been found most convenient and distribution of water most economical. In densely populated tracts there is a less likelihood of running water to waste because of the even distribution of water.

Well system is suited to those areas where the level of the sub-soil water is fairly high, the sub soil water abundant and the soil is not rocky. In places, where the sub soil water level is deep, it is not an economic proposition to irrigate agricultural crops, viz., in the sandy deserts of Rajputana where the depth is sometimes as great as 350 feet, it is too costly to lift water. Rocky beds also prevent digging of wells. In the Deccan Tableland, the rocky nature of the soil and the existence of the sub soil water at great depths prevent an ordinary cultivator to sink a well for irrigation purposes. Many thousands of acres lie in a state of wilderness because of the want of proper system of irrigation. In the United Provinces, the Eastern Punjab, Bihar and Orissa and Western Bengal, well irrigation is more economical and efficient because of the soft bed and moderate rainfall.

There are many reasons why tank irrigation is so prominent in the Deccan. The first explanation lies in the peculiar configuration of the soil. The undulating character of the region, together with a rocky bed makes

the canal construction prohibitive. Moreover, the rivers are not snow-fed and they are solely dependent upon the rain-water ; there are many streams which become torrential during the rainy season but dry up when rains cease. On the contrary, the existence of deep valleys between two hills makes it convenient and economical to put a weir across them and impound rain-water in reservoirs for distributing a regular supply of water through channels to the arable fields. Lastly, the scattered population of the tract also favours the system of tank-irrigation. Generally speaking, a village possesses a small village tank which irrigates the fields of the cultivators. If a canal travels for long distances without being utilized in the midway, the wastage through percolation of water will be immense. So this is the only possible and efficacious method by which the abundant rainwater can be conserved that would otherwise flow out uselessly into the ever-yawning oceans. Tank irrigation has reached its highest perfection in Madras.

Advantages of Irrigation

In spite of the huge capital expenditure incurred in the construction of irrigational projects, the advantages derived from them are overwhelmingly great.

(1) The obvious merit of irrigation lies in the fact that it affords an effective protection against famines and scarcity, even in those regions where rainfall is generally plentiful and certain.

(2) Owing to the certainty and regularity of canal water, canals have facilitated the extension of cultivation in tracts subject to scanty or precarious rainfall and have increased the productiveness of the irrigated crops. Many thousand acres of treeless wastes specially in the Punjab, in the districts of Lyallpur, Shahpur and Montgomery and Rajputana have been converted into smiling lands abounding in rich harvests.

(3) The cultivation of two and sometimes even three crops in a year is made possible due to an assured supply of water. Even in the sweltering heat of the summer season, when land is parched and hard baked and every blade of grass is scorched, cultivation of sugarcane,

cotton, etc., can be carried on successfully without being dependent upon the rain-water

(4) As a result of the establishment of a large number of canal colonies, the pressure of population in congested areas has been greatly relieved

(5) With the more equitable distribution of agricultural population, consequent upon the availability of irrigation facilities, there has been a marked increase in the agricultural wealth of the country

(6) Another great advantage which follows in the wake of canal irrigation is that it brings the sub soil water level up, where construction and operation of wells for irrigation purposes becomes easy and economical

(7) Railway profits, specially in the Punjab, have greatly increased, because of the increased productivity and commercial nature of the farming

(8) There has been an increase in the revenues of the Government not only directly, from the sale of waste lands, land revenue and water-rates, but also indirectly from the growing prosperity of trade and commerce.

(9) The introduction of scientific methods of cultivation is made possible—leading to an increased productivity of the land. In short, irrigation has brought in its wake greater wealth and happiness where poverty and chronic misery prevailed at one time

4/ Defects of Canal Irrigation

Canal irrigation is not free from its defects, it has produced many serious evils, the solution of which requires an intelligent study

(1) The enormous waste of water in canal irrigated tracts often leads to water-logging which results in the death of plants due to the want of air or destruction of nitrates. Having too much water in the soil means the exclusion of air which is necessary for plant growth and for the activities of the soil organisms. Wet lands owing to excessive presence of moisture generally tend to become weedy lands, which yield commonly inferior type of crops both qualitatively and quantitatively. Soils have thus deteriorated in the Punjab where thousands of acres

have been thrown out of cultivation by the rise of sub-soil water.

(2) Excess of water, when applied to the fields without due regard to the needs of the crop, has more oftener than not resulted in the accumulation of many injurious salts as an efflorescence (*reh*) on the surface making the soil hopelessly sterile beyond any hope of recuperation.

(3) Lack of proper drainage together with the excessive moisture produced by water-logging has made the climate malarious, which is so frightfully injurious to the health of the people.

(4) Too much dependence of the ignorant cultivators on the subordinate canal staff for the supply of water is also considered by some as a great weakness of the system.

A Greater Need

Although a considerable progress in providing irrigation facilities to the dry tracts of India has been achieved, much remains to be accomplished. The fear of drought in the country, where the prosperity of trade, commerce and industry is intimately bound up with the agricultural prosperity, is to be avoided and any efforts to place agriculture on a more stable basis by providing a regular supply of water, would go a long way to the solution of the problem of poverty in India. It is estimated that irrigation facilities including all sources of artificial irrigation, whether undertaken by the Government or by private enterprise, are available only to sixteen per cent. of the total area cultivated. Thus, there is absolutely no provision of irrigation facilities for the remaining 84 per cent. of arable lands. The risky nature of the agricultural industry in India has reached to such a serious state that it has made the agricultural population quite inert and fatalistic—a feeling deterrent to sound economic progress. When the arid tracts of the Punjab can be converted into smiling fields through a network of canals, there is no reason why further improvements of water facilities to the remaining tracts exposed to the rigours of occasional droughts will not bring the same

salutary effects upon the agricultural industry To speak that the freakish nature of the Mousoons is responsible for the poverty of the Indian cultivators seems wholly fallacious. Rather it is the failure on the part of the people and the Government to guard themselves against this natural deficiency that is responsible for the adverse state of affairs

The attention of the Government and the well wishers of the peasantry is now directed towards the improvement of village conditions But it should be taken note of that all other schemes regarding the improvement of villages should not come unless the essential condition of providing water facilities is fulfilled Statistics of crops taken in different provinces have shown that the average output of a crop with irrigation facilities is generally 50 per cent higher than that of unirrigated areas Thus, the annual yield of crops can be increased to 50 per cent, if all the precarious tracts are provided with adequate artificial water facilities At places, where canal water cannot reach or is not economically possible, the Government should come to the assistance of the agriculturists in the construction of wells by the provision of technical advice grant of Taccoavi loans, etc. Construction of tube wells worked by cheap electrical energy can be very successfully undertaken by the State Some rudimentary form of co operation still exists in the villages for the construction and working of wells, and it would really be a great thing, if agriculturists were to organize themselves on co operative principles in sinking and working tube-wells which are sure to serve as an effective remedy against any failure of rains

CHAPTER XIV

ORGANIZATION

The Organizer : His Importance and Necessity

We have already an opportunity in the foregoing pages of stating organization as the fourth agent of production: let us now speak something of its importance and necessity in the modern industrial organization. The function of an organizer is to bring about a proper co-ordination of the various services of land owners, labourers and capitalists to get the best results with the minimum of expense and trouble and to remunerate them most satisfactorily. In other words, organization helps to combine the services of land, labour and capital in the production of wealth.

Even in the simplest form of production some degree of management, and organizing ability are needed for success. For instance, an agriculturist who is his own landlord, labourer and capitalist must decide as to what crops should be grown on particular fields, and how many ploughings and waterings should be supplied to a particular crop. He must also select the kind and amount of seed to be sown and the type of manure to be applied in raising specially rich crops. He also exercises his organizing ability in reclaiming poor lands or in improving their productivity, so as to yield more good results both in quality and quantity. Thus, even in elementary conditions, some degree of organization or superintendence is necessary but the necessity of organization becomes much more insistent when the various factors, land, labour and capital are owned by different persons, or are situated in different places. "An agency is required which will bring them together and co-ordinate their functions, supply the various factors in the right proportion and at the right time, and see that each factor is remunerated for its con-

tribution to production" Success or otherwise of a business in the modern highly organized industrial system depends upon the degree of organization and the entrepreneur is the pivot around whom hinges the movement of the other factors of production. The strength of the different factors lies in their effective co-operation under one organization. The issue of large scale modern industry, in the absence of any organization, can better be imagined than described everything will go criss-cross, characterized by many awkward abnormalities and numerous fatal accidents, the output will be hopelessly diminished and in the absence of any initiative to improvements an utter stagnation will be brought about, and in no time the whole structure will come down crumbling to the ground, entailing incalculable hardships and immense losses to the labourers and capitalists alike.

The admirable note from F. A. Walker's *Political Economy*, regarding the indispensable position of the entrepreneur in a modern industry will repay our study well. He writes that *mastership* or the entrepreneur system is essential to a large and varied production. The industrial enterprises of the civilized states could not have been brought to their present height without mastership, and could not be maintained at that height without it. In its first stage, the division of labour does not necessarily imply the introduction of the master class. When the forms of production are few, when materials are simple, when only hand tools are used, when each artisan working at his bench makes the whole of the article to be marketed, when styles are standard, and the consumers of the product are found in the immediate neighbourhood, the need of the master is not felt. But when the handloom gives way to the powerloom, when the giant factory absorbs a thousand petty shops, when many persons of all degrees of skill and strength contribute to a result which perhaps not one of them comprehends perfectly, when machinery is introduced which crushes stone and iron with the force of lightning, when costly materials require to be brought from the four quarters of the world through every land, when the fashion enters demanding incessant changes in form or substance to meet the

caprices of the market, the master becomes a necessity of the situation.

Efficiency of Organization

It has been already pointed out that organization is the soul of modern industrial enterprise. Efficiency of organization denotes capacity or ability to organize a business with greater economy of factors of production for obtaining the maximum results. Efficiency of Organization depends partly on the other factors of production which he employs in business, and partly on the qualities possessed by the organizer. The organizers of business have been called "captains of industry" who like the officers of army keep an ever observant eye on the internal and external conditions of the industry.

An organizer in order to be successful in his business must have business acumen, judgment and a personality to inspire confidence and goodwill among his subordinates, colleagues and public men. He must understand thoroughly the nature of the demand and regulate his supply accordingly and should be able to anticipate the future possibilities and market conditions.

In order to bring into full play the resources of different factors of production he must have also administrative ability, particularly in the direction of labour control. He has to see and exercise strict vigilance that each labourer is given the type of work he is best fitted for, that he neither shirks his work nor overdoes his part and that labour force in general is not put to any vexatious or harsh treatment at the hands of subordinates.

It is also necessary for an organizer to have full knowledge of the technical details of the business, of the machinery and appliances employed in the business, otherwise he is liable to err on many important details.

Lastly, the organizer must be courageous and daring in order to meet successfully and boldly any unforeseen contingency. It often happens that in spite of all the best calculations, the business meets with a partial or total reverse. It is on such occasions that the ability of an organiser is put to a real test and the less intelligent, shrewd and conscientious are eliminated during such trials.

DIVISION OF LABOUR

In the modern system of industrial organization *Division of Labour* means the separation of the different tasks in the production of any commodity in such a manner that each worker instead of doing the various kinds of labour for the satisfaction of his own wants devotes himself exclusively to one particular task and usually to that kind of job for which he is most fitted. In the primitive societies, we find little or no division of labour, each man without the aid of others provides himself with all the necessities of life. In the various stages of productive effort—from the primitive stage of direct appropriation when man lived by hunting, fishing and procuring fruits, etc., provided freely by nature, to the pastoral, agricultural, handicraft and industrial stages, we find “division of labour” assuming more and more specialised forms until in the modern times of mammoth factories the work is split into several fractional tasks, each undertaken by a worker or a group of workers.

Division of Labour may be *simple or complex*. Under simple division of labour, a man carries through the entire process of production himself, e.g., a shoe maker does not only make the shoe but he also tans the leather and carries all other allied processes independently of anyone else. Under complex division of labour, the entire process of making a complete thing is split into minute sections, each of the productive process being given to each labourer, or to each group of labourers, e.g., to continue the above illustration, instead of one cobbler working intermittently at all the various stages in the making of a shoe, in a modern shoe factory, the entire process is divided into various processes, each of them being assigned to a different worker. To the latter is given by the economists the technical name “division of labour”. But while the workmen to attain specialization divide the processes among themselves, they combine their efforts in producing the finished article, and hence division of labour has often been described as *combination or co-operation of labour*.

Forms of Division of Labour

Penson has distinguished between four forms of division of labour which may be enumerated as follows :

1. *The division into trades and professions.* This form of division of labour arose at a very early stage of human society, (when people adopted different professions perhaps according to their inclinations and capabilities, and began to specialize in their callings.) The assignment of separate duties to men and women, or of special functions to the king, to the warriors, to the priest, to the businessman thus giving rise to certain social classes, are examples from primitive society. The caste system in India is an instance of this form of division of labour which assigned special functions to four distinct castes.

2. *The division into complete processes.* (Under this system, the product of one set of producers can be sold to another and utilized by them ; the finished product of the one set provides the material on which the other works.) Thus instead of cloth being made by one person from the raw material, the cotton spinning, weaving and dyeing are done by separate workers each attaining a specialization in his own branch of work.

3. *The division into incomplete processes.* With the introduction of factory system still minuter sub-division of labour has been made possible. Under this form, (the industrial workers have different parts of the process assigned to them.) The work of each is merely a contribution to the final product, from which it cannot be separated and can have no separate existence or value. Work becomes more automatic and specialized. For example, in a modern shoe factory one man cuts out the leather, another cleanses it ; one cuts the sole, another makes the heel ; one nails the sole on, another stitches together ; one shapes the upper, another polishes the shoe. Thus the whole productive process is split into unimaginable minute parts and each contributes his special product to-be used by his co-workers.

4. *The division into districts suited to particular industries.* It is also called the 'geographical' or 'territorial' division of labour. As a result of the combination of

various physical, climatic, social or political causes industries become localized in particular centres. Rapid and cheap means of transport and communication are greatly conducive to this territorial specialization of labour.

Its Advantages

(1) *Increase of skill* The skill or dexterity of the worker is immeasurably increased by repeatedly doing the same process day after day and year in and year out. Practice makes perfect, one who is a jack of all trades is master of none.

(2) *Saving of time* The gain in time is twofold, the worker has not to pass so frequently from one operation to another. Secondly, he can learn his special process in less time, thus shortening the period of apprenticeship, for as the task becomes subdivided its difficulty is lessened.

(3) *Economy of labour power* Workers can be classified easily and assigned to tasks according to their capacities. This adaptation of task to the faculties of individual workers under a highly intricate system of division of labour leads to greater economy of labour and increased production. Light work can easily be performed by women and children while man can devote his energies in those operations which require greater strength, intelligence and resourcefulness.

(4) *Breaking down barriers between different trades* As a result of the similarity of the work in different industries brought about by complex division of labour, it has been made possible for the labourers without any further training to move from one trade to another, when other trades offer better remunerations, or when there is depression or unemployment in one or the other trade. Hence, division of labour has greatly facilitated the mobility of labour.

(5) *Economy of capital* As a labourer works constantly at one process of the work, the machine can be utilized to its fullest extent. If a labourer tends many operations, it is not natural that while engaged in one process, the other tools, in the intervening period will remain idle.

(6) *Diminution of physical strain* Strain is lessened

by the use of machinery for burdensome and heavy task ; monotony of work is also diminished, as the more monotonous works are usually taken up by machinery.

(7) *Increased use of machinery.* There is a very close connection between the extension of division of labour and the extended use of machinery. Division of labour or specialization of functions by dividing the work of production into a number of simple and almost routine operations, facilitates the introduction of machinery which in turn widens the scope for division of labour.

(8) *Promotion of inventions.* When a labourer works at the same process throughout his life, he has better opportunities to observe defects in specialized capital and suggest important inventions. Many discoveries which have ultimately relieved them of much manual effort and strain have come from the brains of workmen.

(9) *Benefit of association.* The modern factory life made possible by division of labour and the increased use of machinery has, by the virtue of closer contact and association of labourers, a great humanizing, civilizing and a sort of progressive influence.

(10) *Increase of output.* The enormous increase in output, attendant upon factory production, has benefited every individual in the form of low prices to be paid for commodities and has considerably raised the standard of living of the people.

Its Disadvantages

(1) *Decrease of skill.* The excessive specialization of a single operation reduces the worker to the level of a mere machine-tender. He becomes less efficient, as instead of giving a complete finish to the article he only makes one small part of it.

(2) *Loss of interest.* A worker, when he works at some small process, will not take the same interest, as when he produces the entire thing with his own hands. His mind tends to become narrow owing to the restricted character of his work and he no longer feels the sense of pride of having produced a thing which is a strong incentive to the accomplishment of the highest kind of work.

(3) *Monotony and dullness* The monotonous work amidst the chug chug of the engine and the rattling sounds carried on with break neck hurry has a cramping effect on the mental faculties of a worker which is apt to stifle his initiative

(4) *Congestion in cities* Division of labour is attended with factory system which is so often associated with "crowded towns and cities, life under unhealthy conditions, absence of personal contact between employers and employed, etc "

(5) *Displacement of adult male labour by child and female labour* As the processes become simpler, there is a tendency on the part of employers to employ cheap child and female labour. Not infrequently, adult male labour is made redundant or exposed to the competition of child labour by the introduction of new machines

(6) *Extreme dependence of labour* It brings about an extreme dependence of man on other members of the group which is often, at least partly, an evil. A strike by a particular group of men—mining, for instance—may throw out of employment not only the remaining men in that business but also thousands or tens of thousands of others whose own work depends upon the product of the industry in which the strike occurs

The defects enumerated above are not inherent in the system, most of them are temporary and remediable. A sound system of education to counteract the deleterious tendencies of narrow mindedness, healthy surroundings, hygienic factories, shorter hours of work, increased leisure, humanitarian legislation, and welfare schemes involving the provision of rest rooms, reading rooms, dining-rooms and playing fields will go a long way in mitigating the evils of the system. Its advantages far outweigh the disadvantages and this is the reason why division of labour is assuming a growing importance in every sphere of human activity

Extent of Division of Labour

The extent of the division of labour in any kind of industry depends upon the following conditions

(1) *The extent of the market.* Division of labour involves production on a considerable scale, and this again depends on the extent of the market. Specialization of functions can be carried on successfully only, when there is a large demand to keep the large number of labourers fully employed. Division of labour is directly proportionate to the size of the market.

(2) *Nature of industry.* Division of labour depends not only upon a large scale production for a large market, it also depends upon continuous production. If the work is periodic, there are less chances of specialization in it, for the worker will have to shift to some other occupation when he is out of work. Division of labour is not applicable to agriculture owing to the seasonal character of the work, whilst in manufactures, e.g., spinning and weaving, one can work continuously at the same process without being disturbed by any ordinary freaks of nature which counts so much in agriculture.

(3) *Nature of demand.* Division of labour can be advantageously practised, if the demand is steady and not marked by constant oscillations. Constant changes in demand hamper large-scale production and prevent the full utilization of division of labour.

LOCALIZATION OF INDUSTRIES

The concentration of a particular industry in a particular region is known as the localization or territorial division of labour. The reasons which determine the birth of industries in certain particular localities are numerous and diverse, but the localization of great industries of today is generally attributable to one or two marked influences, such as nearness to raw materials or to sources of powers. The chief industries localized in India are cotton spinning and weaving in the Bombay Presidency, jute manufactures on the Hoogly, coal, iron and steel industries in Bengal and Bihar and Orissa, tea in Assam, coffee in the Madras Presidency, leather at Cawnpore and Madras, the sandalwood industry in Mysore, sugar factories in the United Provinces and North Bihar, furniture, resin, turpentine in Bareilly, silk-weaving at Benares, carpet-weaving at Mirzapur, and marble works at Agra.

Causes of the Localization of Industries

Some of the important causes responsible for the localization of industries may be given below—

(1) *Nearness of raw materials* The extractive industries such as mining, quarrying, lumbering and fishing are necessarily localized in the neighbourhood of their supplies, e.g., iron and steel works in Bengal, Bihar and Orissa, gold mining in Mysore, wood-works in Bareilly and paper mills in Titagarh near Calcutta. The cotton mills in the Bombay Presidency and the jute mills on the banks of the Hooghly near Calcutta are concentrated due to availability of raw materials at hand.

(2) *Nearness to power* Industries get localized near places which can command the cheap supply of power. Formerly, before the discovery of steam when running water was used as power, mills and factories were set up on the banks of rivers. Later on, when steam began to be utilized industries tended to concentrate near coal repositories. Again, with the introduction of hydro electric power a gradual retreat is discernible.

(3) *Physical and climatic conditions* They also play a very important role in the localization of industries. (Besides, sources of power, the climatic environments, advantageous situation relative to ports and natural facilities for transport are regarded as of very great importance to certain industries.) Lancashire's damp climate is extraordinarily suited to cotton spinning and weaving, enabling finer yarns to be spun than in other localities.

(4) *Accessibility to markets* The presence of a large demand is in itself a great attraction to the development of industries. In former days, the industries tended to flock around the royal court or the seat of fashion. The localization of artistic trades in Agra, Benares, Dacca, Kanauj, Lucknow and Murshidabad can be attributed to the patronage of the court and of the wealthy population. Moreover, industries are attracted to the neighbourhood of large towns because there is a large demand for their products.

(5) *Momentum of an early start* Sometimes industries

tend to grow in a particular locality without any special reason, but merely because some pioneer started his industry there. And once an industry is established it tends to persist there, as it comes to acquire many advantageous points with the passage of time.

Advantages of Localization

(1) (As a result of the localization, the commodities manufactured in that particular locality acquire a reputation which secures for them a good market and a good price.) Dacca muslin, Kashmere shawls and brass wares of Moradabad are good instances.

(2) (It also brings about a great increase in the efficiency of labour, capital and land.) A localized industry creates a kind of hereditary skill, as the children of the workers engaged in that industry learn many intricacies of the trade unconsciously from their childhood. The place also becomes a good market for that kind of labour which is employed by the industry, because the labourers when they start in search of employment come to that place without any waste of time. Moreover, it ensures a steady flow of labourers to the great relief of the employers.

(3) (Localization brings about an all-round progress. Banking organizations come into being and industries can secure a sufficient amount of capital to finance their trade.) Many big concerns come to stock the spare parts and accessories needed by the localized industry and to undertake the repairs of the machinery.

(4) (The promotion and growth of subsidiary industries is another advantage, resulting from the localization of industries,) e.g., the development of Tata Iron and Steel Works at Jamshedpur has also led to the establishment of subsidiary industries such as the Indian Tin-plate Company, etc. Similarly, when good many industries work together, their waste products are utilized in the production of some other article, e.g., paper mills in Bombay use the sweepings of the cotton mills as their raw material.

(5) (Sometimes supplementary industries are also started to provide employment for women and children, e.g., cotton-mills near iron mills.)

specialization of functions together with larger volumes of output turned out under one organization has been the watchword of economic progress. Since the industrial revolution, owing to the division of labour and the consequent profitable employment of machinery, remarkable development in transport facilities and the widening of market, production on large scale has become the accepted dogma of the industrialists.

{Large scale production refers to the production of a commodity on a large scale and it involves the employment of a large number of labourers, the use of large and continuous supply of raw material and power-driven machines under the same management with a considerable risk.} The growth of giant industries employing the most massive machines, where a layman's imagination staggers and understanding refuses to work, is a modern phenomenon. Large scale production is characterized by concentration and the employment of the various factors of production on a large scale, be it in manufacturing industries or in such commercial enterprises as railways, tramways, shipping or distributive agencies. In India, the large cotton and jute mills, the Tata Steel Company, the sugar, cement and match factories, railways, etc., may be given here as some of the instances of large scale production.

The advantages of the large scale production, in the words of Penson, may be summed up in one phrase—*saving of productive effort*, that is, through economies of large scale production a given result can be obtained with less effort—or, in other words, at less cost.

Advantages of Large Scale Production

1. *Economies of division of labour.* { We have already indicated the economies resulting from the division of labour and their repetition seems superfluous} But it may be referred to in passing that in large production labour can be classified more easily according to its capacity; expert skill can be employed to operate intricate and delicate processes and the head of the business, after delegating the routine functions to expert managers, can devote himself wholly to the large questions of policy and general superintendence.

2 *Economy of machinery* The gain from the employment of machinery in a large scale production arises in the following manner

(a) A large establishment can afford to install expensive and specialized machinery even for comparatively insignificant processes which result in considerable economies in production

(b) It can with larger funds at its disposal, also afford to buy up to date machinery and discard old ones, whereas in a small scale production it is not possible

(c) A large scale producer as against a small scale producer can employ experts to carry on improvements and experiments with a view to minimize the cost of production

(d) Cheap motive power can be secured as greater the quantity of motive power consumed in a factory, the expenses of production per unit tend to become lower and lower

(e) A large establishment has also its own permanent arrangements for the repairs of buildings and machinery, which greatly reduce the working expenses

3 *Economy of land* In proportion to the output of the factory, a large manufacturer has to pay smaller rents than the small scale producer

4 *Economies of buying and selling wholesale* More favourable prices at higher rates of discount and commissions and better qualities of raw material can be secured by making heavy purchases. Similarly, an appreciable economy can be effected by disposing of finished products in larger quantities. Moreover, when goods are purchased in larger quantities, a large scale producer gains in the shape of rebates on wagon loads usually allowed by the transport agencies

5 *Economies of material and the utilization of by products* In larger concerns the wastage of material is comparatively less. Not only is the waste of raw material in bigger establishments checked, but efforts are made to utilize waste product and by products so much so that even small things which would have been thrown away under small scale production are effectively employed for

further production of wealth. For instance, in the mineral oil industries, material which was thrown away as waste is now utilized for the production of lubricating oil, etc. It is said that not a single hair of the animals that enter into the big slaughter houses of the United States of America is wasted.

6. *Economy of advertisement.* The cost of advertising and the expenditure incurred in the employment of agents and commercial travellers to canvass the sales of the products of a big establishment are comparatively less in proportion to its output. It is beyond the capacity of a small scale producer to give publicity to his goods to the same extent.

It may also be mentioned here that consumers as a class benefit considerably because due to economies of large scale production the cost of industrial products per unit goes down.

Limitations of Large Scale Production

From the numerous economies effected in large scale production, one should not run away with the idea that the larger the scale on which a business is carried on, the more profitable it must be. There are certainly some limits beyond which further expansion is uneconomical. The following are the main limitations of large scale production.

1. *The capacity of the employer.* Efficient management and supervision is the keynote of a successful large business. With the expansion in the size of the enterprise, so many complexities arise that completely surpass the capacity and energy of an ordinary employer. The minute supervision of the working of the different factors of production together with an effective control of the hired labour which has got no personal interest in the success or otherwise of the business demands the greatest abilities of the directing agency. Unless an employer is gifted with an exceptional combination of versatile qualities for thoroughly organizing the great and varied complexities that arise in the course of a large business, there are fewer possibilities of success and hence the expansion of a business is regulated by the capacity

of the employer. If the scale of business exceeds the point where it cannot be supervised properly, the economies resulting from large scale production are nullified to a considerable degree by the wastage and leakage due to inefficiency of organization.

2 *The extent of the market* Large scale manufacture implies production of commodities on a stupendous scale. If the demand for a particular kind of commodities is small and is characterized by constant fluctuations, it is not economical for a large scale producer to glut the market with superfluous goods which have no demand in the market. Other things being equal, the larger the market the more steady and uniform the demand, the greater will be the tendency towards large scale production. Large scale production by producing articles at cheaper prices leads to an extension of the market. 'In earlier times when producers sold their goods only to their immediate neighbourhood, the market was very narrow and the scale of production very small. But at the present day with our highly developed means of transport with easy communication by post, telegraph and telephone, with our banking system and our various forms of commercial machinery, producers find a market in the most distant places and the possibilities of increasing the size of their business are enormously increased.'

3 *The nature of the business* Certain types of businesses are more successful on a small scale than on a large one. For example, in agriculture large scale production beyond a certain limit is not economical, on account of the seasonal character of the work with no benefit arising out of the division of labour and the costly expenditure incurred in the supervision and management of farming operations scattered over a long area. The large scale production is also not possible in such business as tailoring, where individual tastes or requirements have to be satisfied, or again, in such trades as the manufacture of ornaments, where the "master's eye" needs close supervision over every minute process of the work.

Small Scale Production

When production is carried on by a producer or

craftsman with very little or no division of labour in his house surroundings with the aid of his relations or a few labourers and small amount of capital and raw materials, it is called small scale production.) No high degree of business ability or administrative capacity as required in the management of large scale enterprises is to be met with in the case of small scale business. Small scale business can adapt itself very conveniently to the requirements of a selected group of consumers. The small scale business still holds a very important place in the industrial economy of our country in spite of all the progress and advancement made in large scale business during the last half a century.

The advantages of small scale business may be enumerated as follows—

1. The small scale producer due to greater personal supervision and interest in the prosperity of his business can maintain the efficiency of his products, men, machines and materials.

2. (Due to greater personal supervision and perseverance, more attention is paid to the details and the quality of the product as a result of which more economies and successful results can be had sometimes in small scale business.) It is for this reason that those businesses, which require minute attention to details are generally conducted on a small scale.

3. Lastly, due to personal touch between the employers and the employees in the small scale business, the grievances or inconveniences of the labourers can be conveniently and expeditiously removed; the industrial unrest and disharmony—a conspicuous and baffling evil of the large scale enterprise—resulting in strikes and lock-outs can be averted, and the consequent suffering and loss of the labourers who are thrown out of employment for several days together can be mitigated to a considerable degree.

Scale of Production in Agriculture

In agriculture too, like all other departments of production, cultivation of land is conducted, either on a small scale by a cultivator of small resources working and

supervising each and every process of the work with minute care and special attention himself, or on a large scale by a capitalist-farmer who employs on extensive acreage of land, a vast number of field-labourers, an up-to-date agricultural machinery and implements, and turns out large quantities of products under the direct management of the salaried supervisors. Large scale farming is generally to be met with in new countries, where extensive tracts of land and large amounts of capital are available in countries like America, Canada, Russia and Australia, large scale farming is practised to the great profit of the agricultural industry. Agriculture, even in advanced countries, is commonly conducted on the basis of one-man or one family producing unit on account of some biological and economic factors involved in its working.

Advantages and Disadvantages of Large Scale Farming

Briefly, the advantages of large scale farming over small scale one consist in the proper rotation of crops, a good drainage or irrigation system, suitable facilities of fencing, roads and foot paths, greater division of labour and the consequent economic utilization of the specialized machinery, application of chemical fertilizers and farmyard manure, availability of expert and scientific skill, economies effected by making wholesale purchases and sales, opportunities of raising particular crops according to the suitability of each plot of land, and better facilities for carrying out experiments. In raising staple crops like wheat, cotton, rice and sugarcane which do not require much personal supervision and careful nursing, large scale farming has proved more economical. A capitalist-farmer practising agriculture on a large scale needs to have great executive and business ability.

Despite all these advantages, there are certain limitations in large scale farming which so clearly explain the persistence of small scale farming. Broadly, we may summarize the disadvantages of large scale farming under three heads.

(1) The first difficulty in bringing the large scale farm to a successful issue lies in its costly supervision and

management, as the area over which agricultural operations are spread is too large and as such the "master's eye" cannot efficiently work everywhere. A great loss of time and energy is incurred in going from one part of the farm to another, in carrying tools and machinery and other requisites from one place to the actual spot of operations. Thus economy of time is not so much possible in agriculture as in some manufacturing industries.

(2) The second difficulty arises out of the seasonal character of the work. In a factory, operatives after being assigned different jobs according to their capacity and energy work on those operations continuously in exactly the same manner year in and year out and a very little amount of supervision and management is needed to direct the working forces of the factory. But agriculture is a biological industry rather than a mechanical one. In large scale farming, it is pretty difficult for the farm manager to reorganize several hundred labourers many times during the farming season in accordance with the variations in the meteorological conditions. Supervision becomes costly and unwieldy too, where the nature of the work changes from month to month, day to day, and even from hour to hour. In agricultural industry, as contrasted with manufacturing industries, the farm manager has to contend with abnormal, unforeseeable and uncontrollable whims of the weather. For example, on the appointed sowing day, if a hail storm were to come, all pre-conceived plans will be upset and the whole working force of the farm will either sit idle or have to be reorganized which requires men of great promptness, intelligence, resourcefulness and executive ability. Owing to these handicaps, division of labour and machinery find little place in an agricultural industry.

(3) Lastly, the individualistic tendencies of the cultivators and their natural aversion to work in gangs prove a great obstacle in the way of successful organization of a large aggregation of farm labourers under one management. They are unaccustomed to disciplined hours of work and hence their preference to work independently.

Farming in India

India is a land of small holdings, petty cultivators and



Net making Industry

asses, and serious and earnest efforts should be made to devise ways and means so as to enable the cultivator to produce his crops at the smallest costs to ensure him the greatest amount of net profit. *The solution of the problem lies not in increasing the yield of his field but in devising means to give him increased profits which alone can bring about his prosperity and fulness of life.* The illiteracy can be removed by the establishment of primary schools, having an agricultural bias on extensive scale in rural areas. So long as there is illiteracy, all suggestions for the improvement of agriculture will fall flat upon their ears. The economies of large-scale farming can be secured by the formation of co-operative associations of individual farmers. For example, farmers may combine on co-operative lines to obtain cheap credit and to purchase costly machinery and implements for their common use, or they may join in sinking wells with pumping arrangements for irrigating tracts now depending for their cultivation on the vagaries of the Monsoons, or they may allot a separate pasture for the grazing of cattle, or they may form common purchase and sale societies to eliminate the profits now appropriated by the *Mahajans*. Co-operation is the real solution of many of the economic ills of the agriculturists, and if its principles are carried out on right lines the movement will prove a beacon light to the agriculturists who are now enveloped in the darkness of ignorance, fatalism, misery and destitution.

Vitality of Cottage Industries in India

Cottage industries are those which produce articles of use on a small scale. It is also called family system of production with little or no division of labour in contrast with the system of factory production, where there is a large aggregation of men and machines under an employer and division of labour is carried on at a high pitch of excellence. Cottage industries must be distinguished from the factory industries inasmuch as the former are carried on by artisans on a small scale, mostly in their own homes assisted by the labour of the members of the family, or a few hired labourers or apprentices. Some cottage industries are carried on by people engaged in them as their primary occupation while some are taken

up by the agriculturist to supplement their meagre and uncertain income as their secondary occupations

India at a very early stage of civilization when she was at the height of her glory and splendour attained a high degree of skill and dexterity in her handicrafts and artistic industries which were not surpassed by artisans of any other country. At a time when the West of Europe, the birthplace of the modern industrial system was inhabited by uncivilized tribes, India's artistic products were highly appreciated and extensively marketed throughout the important countries of the world.

As a result of the Industrial Revolution in the West and the advent of Britishers into India, the cottage industries which had once enjoyed a world reputation began to decline and the decline was most marked about the middle of the nineteenth century when many forces served to precipitate their downfall. The importation of cheap articles manufactured abroad by the large scale industries equipped with the most efficient organization and labour-saving appliances, the disappearance of the patronage of the Mughal Courts and the nobility resulting in a complete cessation of the main demand for the products of the indigenous handicrafts and the consequent changes in the tastes and outlook of the people, the laissez faire policy of the Indian Government, and lastly, the unpreparedness and the absence of any initiative among the artisans to adapt to the changing circumstances and to combat against the corroding tide of the Western industrialism, led to the extinction of the cottage industries and to more intensive ruralization of the country.

Although terrible has been the blow from the side of machine industries, both of India and foreign countries, the indigenous industries have survived the rude shock and in spite of all their backwardness and drawbacks, they possess a remarkable vitality and constitute a very significant factor in the economic and industrial life of India. Cottage or small scale industries are to be found in almost every village and according to the Report of the Indian Industrial Commission the number of the workers in the various cottage industries is still much larger than those of the operatives employed in the

Importance of Cottage Industries

The establishment of the present languishing cottage industries on a more stable basis, with a better system of co operative organization, - assisted always by the ready advice and monetary help of the Government, will be a real asset to the country. The development of the cottage industries is immediately required as it will help the poor people of India in many ways. There is no antagonism between cottage and factory industries, both can flourish side by side as is evidenced in the case of the highly industrialized countries like Germany, Japan, France and Switzerland, where cottage industries, in spite of the tough competition of power industries have not been ousted or superseded. The encouragement of the cottage industries will provide subsidiary employment and income to the surplus agricultural labour which has to remain idle for a major portion of the year. Moreover, the fears of famines and other unforeseen natural calamities can to a large extent be mitigated, if the people have a subsidiary occupation to fall back upon. In the words of an economist, they will serve as a second string to the bow of the agriculturists. The annual quantity of production of the country can be considerably increased by the employment of child and female labour, if the industries are carried on in the midst of their families.

Again, many of the evils attendant upon the factory system such as overcrowding, loss of freedom for the worker, drunkenness, low and expensive pleasures of the cities and the unhealthy conditions under which workers have to work and live may be avoided to a certain extent in the case of small industries. On the top of all that, the cottage industries are more suitable to the genius and temperament of the people as they dislike the discipline of regular hours of work and the strenuous exertion in a factory and prefer to earn a scanty living in their own villages rather than travel to distant lands in search of employment. The introduction of cheap hydro-electric power and its distribution in the surrounding rural areas is likely to open another important chapter in the career of our cottage industries. Hand-spinning and weaving, calico printing, dyeing, carpet weaving, metal working,



Cloth printing Industry

sericulture, embroidery work, work in precious metals and jewellery, wood-work including carpentry, furniture and cabinet making, pottery and ceramic wares, leather works, fine artistic works such as carving in wood, ivory or stone and toys are some of the important cottage industries of India that may prove to be the most successful handicrafts in the future industrial economy of the country, provided organized efforts are made to strengthen their present decadent condition.

Suggestions for Improvement

In view of the fact that our cottage industries still survive with remarkable tenacity and upon whose prosperity depends the prosperity of the millions of Indians, means should be sought for their consolidation and improvement.

(i) *Education of the workers.* We have already seen how the artisan is handicapped in different ways by his want of education. He is conservative, unambitious and unenterprising; he should be given general and technical education. Many technical schools have been started for imparting technical education, but for a variety of reasons they have not yet availed of these opportunities. Industrial schools of a more practical character are the need of the moment.

(ii) *Financial assistance to cottage industries.* Co-operative credit societies and in some cases the Department of Industries might lend money on easy terms to the craftsmen. Most of the artisans like agriculturists are in the sticky grip of the *Mahajan*. Tools and up-to-date machinery should be supplied to the artisans to improve the efficiency of production.

(iii) *State patronage.* A bolder policy and well-chalked out programme of encouraging and patronizing artistic industries should be adopted by the Government. The propaganda for the popularization of the cottage industries should be conducted in a business-like spirit and concrete proposals for any improvement should be backed by monetary support and expert advice.

(iv) *Provision of markets.* Co-operative credit societies should be organized for the supply of raw materials to

individual artisans and the sale of the finished articles deposited by those artisans in a common warehouse. Owing to the lack of marketing facilities, the artisans are stripped of their due profits, and so efforts should be made to completely oust the middlemen from their midst. The Arts and Crafts Depots of Lahore and Lucknow were started in order to remove this handicap to some extent. Industrial exhibits will also serve to extend the demand for such articles.

(v) *Public patronage to home made goods* A noteworthy feature of the recent years in India has been the growing tendency among its nationals to use only those articles produced in their own country, even if they are more dear and less fashionable and durable. In fact, the deep realization of the foreign economic domination, a rise in the nationalistic spirit and the Swadeshi Movement inaugurated by Mahatma Gandhi have all concurrently given a new fillip to the rise and expansion of the cottage industries in India. If we want to see our cottage industries prosper and starving millions properly fed and clothed, we will have to make some sacrifice so long as they are in their infantile stage and not placed on a sound footing. There must be a determination on the part of the people to consume goods manufactured in the country and they must inscribe upon their hearts that public patronage is far more conducive to the success of the cottage industries and the prosperity of the nation at large than the highest form of any Government patronage.

AGRICULTURAL AND INDUSTRIAL DEVELOPMENT IN UNITED PROVINCES

Industries —

The Board of Industries created by the U P Government has decided to help pioneer industries of the province by sanctioning grants in aid. The Board has selected the following industries as suitable for development in the province — Leather-boards, leather belting, felting of wool, making of wine gauges for sugar factories, lock making, scissors and cutlery making and making of paper and cloth paper.



'Chick'-making Industry

The activities of the U. P. Industries Department have resulted in an all-round improvement in the cottage industries and marketing organization in the province. To promote the development of rural industries many interim grants of Rs. 1000 and over have been given to many districts. Extensive survey of minor industries, e.g., oil, soap, ghee, cane furniture, toys, pottery and glass-ware has been undertaken.

The work on the preparation of improved fibres and wool will be done at the H. B. Technological Institute, Cawnpore and arrangement for the appointment of a full-time chemist is being made for a period of five years.

In the department of wood working industry, satisfactory progress has been made by the wooden Toy Making Class started at Deochara, District Bareilly. Demonstrations in the use of modern tools are being regularly given to the village carpenters.

In connection with the development of the glass industry, two furnaces will shortly be erected at Ferozabad. Attention is being concentrated on the inside working and the equipment of the laboratories.

For the purpose of promoting the handloom industry, two hand mercerizing machines and a calendering machine have been distributed by the department. The U. P. Government have approved a new scheme of starting 25 handloom stores. The stores will work on co-operative lines. Each store will have five societies with 200 members each. The aim is to make the marketing organization a federation of production stores and to organize the industry on a co-operative basis. It is understood that Government have provided to spend ultimately Rs. 26,500 for the purpose. A Central selling depot for all cottage industries in the province will be opened at a central place in Lucknow with its production and distribution agencies spread all over the U. P. and outside.

The Bee-keeping has been particularly cared for. The Jelli Kote Apiary in Naini Tal is doing very good work. It is the only Apiary in India where training is also given to students in practical hive-making.

The research work has also been carried out in regard to the utilization of Molasses. The manufacture of

power Alcohol from it has been allowed to some factories by the U P Government

The U P Government have sanctioned the scheme for the manufacture of bicycles and gramophone records in the province while the scheme for the manufacture of tin lanterns has been referred to the technical experts for study and report

The scheme for the manufacture of umbrella hilt, timepieces and clocks has been referred to the Principal of the Technical Institute, Lucknow for making necessary trials and then to submit a detailed report

Agriculture —

An outstanding event was the decision to start 500 new seed stores with the necessary staff under the Rural Development campaign. The department this year distributed a total of 23,98,157 maunds of improved seed. The number of private farms which worked under the departmental supervision was 1372

In addition to the two agricultural schools, the College at Cawnpore continues to impart agricultural training of the highest order. Training and short courses were provided in practical dairy, poultry, preservation of fruits and vegetables

Research in the improvement of crops is being conducted under three economic botanists. The agricultural chemist is engaged in the problem connected with the soils. The Entomologist is devoting a good deal of attention to the control of 'Pink Boll' work of cotton. Experiments connected with the improvement of oil seeds, small millets, pulses and fibre crops were done at various places

The breeding of pedigree herds of cattle went on at many farms while investigation on the nutritive value of a number of cultivated fodders are going on at Jhansi. The department distributed 628 stud bulls during the year. Great strides have been made in sugarcane research work. The study of the factors which limit sugarcane production in the U P was continued to be made in the scheme for sugarcane physiology at Shahjahanpur

The section of agricultural engineering was responsible for completing 402 tube wells and 30 artesian wells in Tarai and Bhabor areas. The improvement and designing of agricultural implements is engaging the attention of the department.

The marketing section is busy with the collection of data and the preparation of survey reports. Countrywide study is being made, of the problem of standardization of weights and measures. Experimental grading of hides and Ghee and eggs testing stations have been started.

MARKETING OF AGRICULTURAL PRODUCE

A five years scheme of marketing of agricultural produce on co-operative lines has been approved by the Government with a grant of Rs. 17,000 for the employment of supervisors besides the creation of ten temporary inspectors. The scheme proposes to cover about 40 districts and many principal crops.

About 250 supervisors who have been selected are undergoing training. It is expected that each supervisor will be able to organize 35 societies in five years. The batches of supervisors recruited in 5 years are expected to cover 35,000 villages. About 80 centres for marketing have been fixed in the province and a senior inspector of the department has been appointed as a provincial marketing inspector for co-ordinating the activities of the various circles. The questions engaging the attention of the marketing inspector are : The fixation and reduction of marketing charges, transportation charges, finance, storage, assembling centres and the sale depots.

FORMS OF BUSINESS ORGANIZATION

In the initial stages of industrial society, organization played a very minor part in production. The same artisan owned the land, labour and small capital and organized the whole business sharing in profits and losses as well. But with the growing complexities and increasing volume of business, the business management has had taken new shapes suited to the new requirements of the business. Various types of productive organizations ranging from the single entrepreneur system to the well-organized large scale industries employing highly specializ-

ed labour according to the size of the business, are to be found flourishing side by side. In manufacturing industries the various types of business organization in the modern world may be enumerated as follows

The Single Entrepreneur System

It is the oldest and the simplest form of business organization in which a single entrepreneur after furnishing himself with his own land, labour and capital or, as he is found in some instances, hiring such land, labour and capital according to his requirements, works the raw materials and directs the general policy of the business. The entire responsibility of the business falls on his own shoulders. If the business succeeds the profits are his, if it fails, he bears the losses. This form of business management is best suited to agriculture, small retail trade and small cottage or shop industries. This is why the entrepreneur in this system also goes by the name of cottage worker or home worker. There are countless artisans in the Indian villages and small towns who work on their own account and produce articles on a small scale for local consumption. The success of the business in this system entirely depends on the organizing ability and initiative of the entrepreneur.

The chief advantage of individual ownership lies in the great personal interest of the employer in the business, and consequently a greater incentive to secure economy and efficiency than in any other form of business organization. The disadvantages are that (a) the man at the head of the business, however intelligent and capable, cannot successfully direct all departments of a large and complex business, (b) the capital that an individual can command is necessarily limited, and (c) the unlimited liability of the individual entrepreneur to some extent checks enterprise and experiments so essential to success and improvement of the business.

Partnership

With the expansion of business, in pursuance of prosperous trade and ever-widening markets, the need for more capital, skill, energy and experience was increasingly realized and partnership business came into existence to

replace the individual entrepreneur system, where the latter proved inadequate and defective. In the case of a partnership two or more but always a limited number of partners may join to carry on a large and difficult enterprise contributing their resources, sharing losses and gains in definite proportions settled by a mutual agreement. The management of the business is also divided, and each takes up that work in which he is most efficient. The partners are jointly responsible for the debts of the firm and the liability of each one of them is unlimited i.e., each partner is legally liable to the extent of all his property (whether invested in the partnership or not) for all the obligations contracted in the course of business by any other member of the firm.

The chief advantage of partnership lies in the greater control of capital and organizing ability over that of individual ownership. Better efficiency can be secured in the business by utilizing the special aptitudes and attainments of the partners. More capital can be secured than in the case of single entrepreneur system, and it can adapt itself more easily to different varieties of production and demand than the larger and more cumbrous forms of business organization. But unlimited liability is a great defect and tends to restrict enterprise. The supply of capital is not adequate for starting large-scale enterprises. The business is also liable to break down due to the personal quarrels and on the retirement, death, lunacy or bankruptcy of a partner.

Joint-stock Companies

When the size of the business began to grow larger and larger and more hazardous as well, it became increasingly difficult for a few partners to invest an adequate amount of capital, and hence the partnership system was substituted by the joint-stock system. A joint-stock company has been defined as "an association of individuals for purposes of profit, possessing a common capital contributed by the members composing it, such capital being commonly divided into shares, of which each possesses one or more, and which are transferable by owners." The main differences are that in a joint-stock company, unlike partnership, shares are easily and freely transfer-

able owing to the wonderful mechanism of stock exchanges, and secondly, in a partnership, each partner is personally liable for the whole of the debts of the partnership business, whereas in limited company the members or share holders, as they are properly called, have no individual liability to its creditors for the debts incurred by the company but their liability is limited to the amount of shares they have bought. For instance, if a share holder has purchased, say five shares of rupees fifty each, his liability for the debts of the company ends on payment of Rs 250. The limited liability system means that the risks of business in the case of individual shareholders are specified and do not exceed the extent of the share or shares purchased by him. The method by which the individual resources are pooled up may be described somewhat as follows.

The total capital (or *authorized capital*) is that capital which the company is authorized to raise from the public. The *subscribed capital* is that part of the authorized capital of the business which is issued or thrown open to the public for subscription. The *paid up capital* is that part of the subscribed capital which the shareholders have paid towards the value of their shares. It becomes equal to the subscribed capital when the full value of each share has been paid to the company. The ultimate undertakers of the risks incurred by a joint stock company are shareholders who seldom take any active part in controlling or superintending the business. For the purpose of general management, shareholders elect a Board of Directors. If the Directors happen to be too many in a Board, the management is further delegated to one or two Managing Directors, elected by the Board of Directors from amongst its members. The Directors are not expected to give their whole time to the business but "they are supposed to bring wide general knowledge and sound judgment to bear on the broader problems of its policy and at the same time to make sure that Managers of the Company are doing their work thoroughly." The detailed and day to day management of the Company is left in the hands of the hired superintendents and managers who are not required to bring any capital into

it. The Directors declare half-yearly or annually profit and loss accounts ; the profits being divided equally on each share.

The advantages of the joint-stock movement are numerous and incalculable. All the advantages of large-scale production and division of labour are best utilized by the form of business organization. The limited liability, the easy transferability of the shares, stability, efficiency and flexibility of the management and a great scope for undertaking new experiments are some of the merits of the joint-stock companies. A large amount of money which would have been spent unproductively or buried in the bowels of the earth is now pooled up for productive purposes by the share system. Owing to the limited nature of the risk, a large number of people is enabled to invest their petty savings in the joint-stock companies. The best illustration of the advantages of the joint-stock companies can be seen in the establishment of such colossal enterprises as the Tata Iron and Steel Works or the Standard Oil Company, etc., which would otherwise have been impossible to start.

There are, however, certain disadvantages. As a result of the increasing complexities and the immensity of the size of the business, the two functions involved in organization are separated. Shareholders who are the ultimate undertakers of risk and who meet seldom to look into the affairs of the company are often duped by the directors and managers. Secondly, owing to the lack of personal touch a wider gulf has resulted between the employers (capital) and the employed (labour) giving rise to many unwholesome conflicts. Lastly, the conducting of rash enterprises, mismanagement and other corrupt practices, furnish a sad commentary upon this type of business organization. Various remedies have been suggested to remove these defects from this form of business organization and the results achieved are tolerably successful. Notwithstanding these disadvantages, the joint-stock system has rendered very useful services in the industrial development of a nation.

Co-operative Production

To do away with the exploitation of the labouring

'classes at the hands of the powerful employers, the co-operative system of production has been ingeniously devised. Co-operation is meant for the weak, poor and oppressed members of the community and it tries, in all its various spheres, to do away with the services of the middlemen who are oftener than not mere parasites. Co-operation has been applied in diverse spheres to achieve different objects, viz —

(1) Co operative credit, in which several weak and poor individuals combine into a corporate body to obtain on their united liability cheap credit and to eliminate the exorbitant rates of interest charged by the money-lenders ,

(2) Distributive co operation or consumer's co-operation, in which the workers and other people unite, as consumers, to purchase their requirements of commodities, receiving their shares of profit in proportion to their purchases ,

(3) Producers' co-operation, in which the workers unite as producers for purely productive purposes. Here we shall content ourselves by presenting a running sketch of the producers' co-operation as it is one of the latest forms of productive organization which is replete with immense possibilities.

A producers' co operative society runs like this. A number of workers may on their own initiative co operate in order to produce a certain type of commodities, thus dispensing with the big employer or organizer. Labourers are the workmen and masters as well, and they take the entire responsibility of risk and guiding production in their own hands. Capital is subscribed or borrowed at a fixed rate of interest. The management of the society is generally carried on by one of the members who is paid a fixed salary. Each member of the society possesses equal opportunities in the management irrespective of the amount of shares he holds.

The advantages of this form of productive organization are many, provided the workers follow the guiding-motto—each for all and all for each—of co-operation in a true spirit. The labourers work with more zeal, interest

of agriculture, or the enactment of a tenancy legislation, or the establishment of a few co-operative societies and stores, or the opening of a few schools, veterinary dispensaries, libraries, or the propaganda for maternity welfare and betterment of village sanitation etc., in rural areas here and there, in the absence of any constructive and co-ordinated rural development programme and receiving the combined co-operation of both governmental and private efforts, will not give any permanent relief to the poor peasants. It follows, therefore, that though the problem of rural development demands almost equal attention at every place, the possible course is to carry out the work of rural development in a comprehensive and systematic manner in selected units or groups of villages of about 20 to 30 villages wherein the activities of all the Governmental Development Departments, e.g., Rural Development, Agricultural, Irrigation, Public Works, Public Health, Co-operative Organization, Industrial and Education Departments, should be co-ordinated with a view to collaborate in the achievement of permanent beneficial results in their respective branches of administration for that selected unit.

Thirdly, in order to stabilize permanent results, it is of the greatest importance that improvements should come from within and that the co-operation and goodwill of the villagers should be harnessed by creating in them a desire to improve their own lot and that they should be taught that they themselves are ultimately responsible to "improve their own condition and make their own lives better, fuller and richer by means of self-help and mutual help." This spirit of co-operation and initiative for self-improvement can be secured by the establishment of Better Living Societies and the re-introduction of Panchayats in villages on democratic principles which have in the past centuries proved so successful in maintaining the co-operative life of, and harmonious relations amongst, the villagers.

But there are some peculiar and outstanding drawbacks from which the Indian peasantry is suffering at the present time in the most acute degree and the detrimental effects of which are noticeable in every walk of rural life.

It is of utmost importance in any scheme of rural development that the resources of Government and all philanthropic public bodies should be directed and co-ordinated in removing the following fundamental drawbacks or *maladies in order to achieve widest possible and lasting results for the benefit of the rural masses*

1. *Removal of Illiteracy* The appalling illiteracy of the rural masses is the greatest impediment in the way of progress and is the cause of the prevalence of conservative habits of the rural masses. It is reported that 90 per cent of the population of this country consists of illiterates. The total number of literates enumerated in the census of 1941 comes to 4,73,22,000—males 3,49,42,000 and females 87,49,000. Facilities for Education are mostly confined to towns and cities. It is mainly due to sheer ignorance and illiteracy that the cultivator fears change. In fact he considers that his existing lot is all that could be hoped for and attained. For the progress of any community it is very necessary to have a sound system of education which should broaden its outlook, develop its spirit of self-help and self sacrifice, tenacity and perseverance, originality and enterprise, responsibility and resourcefulness, and increase its power. At present the system of education imparted is supposed to be too theoretical for the solution of practical problem and entirely divorced from the actualities of life. Professor John Dewy of the United States of America has observed that "in an industrial society the school should be a miniature workshop and a miniature community, it should teach through practice, and through trial and error, the arts and discipline necessary for economic and social order." A system of education which may prove most useful to the rural areas has first to be settled by educational experts and then a network of schools has to be spread over to impart such education to the villagers as could banish root and branch for all time, the present day evils which exist in rural areas in this country.

2. *Development of means of transport and communication* Equally essential is the provision of cheap and rapid means of transport in the rural areas for their economic and industrial development. For a considerable

time, the energies of the Government remained confined solely to the construction of roads and their development between cities and cities ignoring the requirements of the interior parts of the country with the result that at the present day the rural areas are practically unserved by any adequate system of metalled roads. Incidentally, with the intense development of roads in and around the cities, one could see the metalled roads running parallel to the railway lines over which the introduction of motor traffic has lately proved a serious rival to the railways damaging their income to a considerable degree. Owing to the lack of communication and the absence of smaller feeder roads connecting the trunk roads or railway line, the cultivators are handicapped in transporting and in marketing their produce and have to pay heavy transport charges which greatly minimize their profits. The Central and Provincial Governments will be required to undertake a large and comprehensive programme of development of smaller feeder roads in the rural areas with the co-operation of the District Boards and Public Works Department. The resources of local bodies are naturally very limited and therefore the development of feeder roads cannot be left entirely to their resources. The provision of facile and cheap means of transport and good communication in rural areas will surely stimulate agricultural production, provide an incentive to grow marketable products such as vegetables, fruits etc., and lead to the development of cottage industries, naturally followed by the economic prosperity of the village side.

3. *Reorganization and establishment of Cottage Industries.* No scheme of rural development in India will be effective and achieve lasting results if it does not take into consideration the vital question of reorganization of cottage industries. For reasons mentioned earlier the pressure of population on land in India has reached a point where economic cultivation is not possible. Under the present circumstances, in the absence of other occupations, the Indian cultivator regards and takes agriculture not as a business but as a predestined occupation on which he has to live whole life. Perhaps nowhere in the world is there such a heavy density of agricultural popu-

lation even with intensive methods of cultivation as in India. This is one of the main causes which speak for the poverty of the Indian agriculturists. The functional or vocational distribution of population needs a good deal of urgent and drastic revision. This can only be done through the establishment of cottage and manufacturing industries in India. The development and extension of industries is very vital for any country that aspires to become economically and politically self sufficient. India is a weaker entity today in the galaxy of nations of the world because of her utter economic dependence on alien countries. It is a clear sign of maladjustment of the vast economic resources of the country that a preponderant population should eke out an existence depending for subsistence on agriculture practised on primitive methods and be only exporters of raw materials for feeding the industries of alien countries. If the poverty of the Indian peasants is to be exercised and their further degradation is to be arrested, it is exceedingly important that cottage industries should be reorganized in order to provide them with subsidiary sources of income, and bold and definite policy of industrializing the country under the shelter of adequate tariff protection should immediately be taken in hand for relieving the pressure on land and bringing economic emancipation of the submerged millions of the country. The advantages that will accrue to the Indian peasants consequent upon the establishment of cottage industries need not be repeated here as they have been dealt with fully elsewhere.

4 *Regulation of Currency and Exchange Policy* In an intricate mechanism of international trade, it is the prime duty of the Government to adapt the larger questions of currency and prices to the needs of the country, because the peasant can hardly be expected individually to control and direct the prices of commodities which he produces for the market of the world. During the last depression practically every country adopted measures to raise the prices of agricultural produce but no action was taken here in that direction, as a result of which the cultivators suffered to an enormous degree as is clear by increasing indebtedness of the agriculturists. On the

contrary, it may be pointed out here that the artificial control of currency and exchange policy by the Government of India, resulting in a contraction of the total volume of money in circulation in India, helped to bring down prices of agricultural produce greatly. Again, the exchange ratio of rupee at 1s. 6d. to the pound has hit the agricultural industry very hard, which maintains a large proportion of India's population. Any action taken to raise the prices of agricultural commodities will substantially help the work of Rural Development.

5. *Defects in agricultural production and their removal.* It has already been pointed out that agriculture as a profession is practised by Indian peasants without any idea of profit or loss. Not only that but certain apparent factors such as the colossal poverty of the agriculturists struggling against starvation, the growing indebtedness of the peasantry, and the strong aversion of the agriculturally trained graduates and other educated people of the country to take up agriculture as an independent profession prove almost in a conclusive manner that Indian agriculture is carried on at the present time as a non-paying concern. The defects in the organization and operations of agriculture should be carefully watched by the Rural Development Officers and their energies should solely be directed to removing those defects in order to make agriculture a paying concern.

1. *Increased water facilities.* Due to the periodical character of monsoons the agricultural industry cannot depend exclusively on rainfall for its water supply. Water is one of the first requisite conditions for successful harvests. A great many irrigation projects of considerable magnitude have been undertaken by the various Provincial Governments for providing a perennial supply of water to agriculture but still there are large tracts in the Punjab, Rajputana, Bombay Presidency, Central Provinces, and the United Provinces which depend exclusively on whimsical monsoons or an irregular and inadequate supply of water for their successful harvests. The greatest amount of co-ordination between various Provinces and States is required in the artificial means of irrigation system in order to safeguard the largest possible extent

of unsafe tracts from the havoc played by the failure of monsoons. Tube well system of irrigation has been successfully adopted in the Punjab and the United Provinces and means should be taken in hand to direct the surplus water of rivers to Rajputana and other sandy tracts. The rainfall water, which at present flows uselessly into oceans can be reservoird and used for providing a regular supply of water to agriculture. With an assured supply of water for irrigation, the yield per acre can be considerably raised and more crops can be raised thus keeping the agriculturist engaged all the year round.

2 *Preservation and application of manures.* The constant cultivation of crops in any particular field exhausts the properties of the soil and, unless renovated by manures, the yield on that field goes on decreasing until cultivation becomes unprofitable. In India artificial manures meant for fertilizing the soil are not used by the cultivators owing to their poverty and ignorance. Farmyard manure is the only manure used by the cultivators but the supply with the cultivator is not adequate and secondly its method of preservation and application to the fields is most unsatisfactory and defective. A major portion of farmyard manure is used as fuel, and for manurial purposes it is preserved in a very careless and indifferent manner. It is either thrown in a corner of the compound or on the outskirts of the village, the valuable and fertilizing properties of which are washed away by the rains or destroyed by the strong winds and rays of the sun besides making the atmosphere of the village insanitary. The method of application is equally defective inasmuch as it is strewn over the field and remains there lying for several days before it is actually mixed with the soil. The cultivator should be taught the economic methods of preservation and application of manures and cheap artificial manures should be urgently found out and a definite practical advice is needed to the farmer regarding the quantity and quality of the manure to be used for certain kinds of popular and paying crops.

3 *Supply of improved seeds.* On account of poverty, very few cultivators can afford to keep good quality of

seeds with them or purchase at the time of sowing crops. Many good and high-yielding agro-types have been discovered by the Agricultural Departments by their research and experimentation at the Government Farms, but they are not much utilized, except for a few improved varieties of wheat, cotton, sugarcane which have become popular, by the cultivators as they are ignorant about the improved strain and secondly there are very few facilities available to them for their acquisition. The total area covered by the improved varieties amounts to 7 per cent. of the total area sown. It is an imperative necessity that reliable agencies for the distribution of improved varieties of seeds to the cultivators should be established with the help of Co-operative and Agricultural Departments at the earliest date possible and care should be taken that the quality of the crop should not be allowed to deteriorate once an improved variety is introduced in a particular locality. Side by side with the distribution of improved seeds, new and more profitable crops should be popularized amongst the cultivators.

4. *Labour-saving Implements.* At present the tools used by the cultivator are too antiquated and not in keeping with the modern processes of production. The Agricultural Department has been carrying on investigations as to the relative usefulness of different types of agricultural implements and it has been successful as well in giving out to the cultivators a few labour-saving implements, such as the fodder chopping machines, the modern plough, etc. But it is very necessary that information about the usefulness of such implements should be disseminated among the peasantry and a practical knowledge imparted for their adoption, repairs etc., and spare parts of such implements should be easily available to them.

5. *Vegetable and Fruit Culture.* With the opening of smaller feeder roads and provision of cheap road transport, it will be much easier for the cultivator to grow daily marketable goods such as green vegetable and fruits which are in great demand and form an important item in the dietary of vegetarians. Is it not surprising that large quantities of fruits are imported into India

when all the natural and climatic factors are present in this country for their successful production ? Recently various Provincial Governments have taken measures to improve and propagate fruit culture but much practical measures are needed in order to achieve substantial results in this respect. The cultivation of vegetable and fruits will give the cultivator an additional and day to day income which is so urgently required in his case because of his periodical income and thus will prevent him from resorting to the money lender.

6 *Remedies against insect pests and plant diseases*

It is very necessary that crops should be made immune as far as practicable from the devastation which follows every year due to natural calamities and plant diseases, etc. From the former there is no escape and the cultivator has to bear the loss with forbearance and equanimity. But every year cotton, wheat and sugarcane, among the major crops are considerably damaged by insects and pests and wild animals. It would be a great boon to the agriculturists if the inroads of such pests could be avoided. The cultivators should do their best if they are convinced of the efficacy of such methods, which can be taught through propaganda and demonstration. The experts should also develop those varieties of seeds which may stand rust and the like diseases of the plant.

7 *Consolidation of scattered holdings* The problem of consolidation of scattered and fragmented holdings is a very complicated one and various attempts have been made and measures adopted by the Government for the benefit of the cultivators in this respect, but hitherto no legislative action has been taken, due to a variety of reasons, for doing away with this evil. If this evil can be brought under control many other outstanding questions of rural life, such as crop planning, intensive cultivation, better irrigation facilities, protection of crops, sanitation and housing, the intercaste quarrels and litigation, will be much facilitated. The fragmentation of holdings has reached a point where cultivation has become uneconomic and wasteful. In view of the direct and indirect advantages which are to follow in the wake of consolidation of holdings, it seems necessary to proceed

with this work with the help of governmental legislation because it has been noticed during past years that where consolidation of holdings has been effected with the consent of the villagers, it has unnecessarily taken a long time and put especially the revenue authorities to an unpleasant task of satisfying the claims of each and every individual to his satisfaction. Propaganda is very necessary in order to awaken them to the necessary and importance of this measure and free them from the false notions of sanctity which they attach to their ancestral fields. By bringing all scattered holdings of a cultivator at one compact place, the establishment of farm buildings can be encouraged, fences can be erected, wells can be sunk for regular supply of water and better and economical management of the cultivation can be effected.

8. *Provision of marketing facilities.* The Royal Commission on Agriculture has summed up the position under which the Indian cultivator has to part with his crops in the following words—"Until he realizes that as a seller of produce, he must study the art of sale either as an individual or through combination with other producers, it is inevitable that he should come off second best in his contest with the highly specialized knowledge and the vastly superior resources of those who purchase his produce." The marketing condition are most defective and disadvantageous from the point of the agriculturists whose gains of good prices are intercepted to a considerable degree by a numerous class of middlemen. The Indian markets are full of abuses and the agricultural produce that is purchased by the middlemen is adulterated by them with the result that our articles become inferior and get lower prices in outside markets. We have already lost the export market due to this unfair and dishonest action on the part of middlemen and earned a bad reputation in the market of the world. Very recently marketing surveys have been carried out under the auspices of the Imperial Council of Agricultural Research and marketing officers have been appointed in the provinces under the Provincial Marketing Officers to control and regulate the marketing of products under healthy conditions. As the agriculturists now produce

for the market, it is very necessary that agricultural trade should be modernized otherwise there is always the danger of their falling into the hands of middlemen profiteers. Co-operative sale societies should be established in rural areas and the difficulties that are at present encountered in the organization of Sale Societies should be carefully studied and gradually removed. A few cotton sale societies in Karnatak and Gujerat, jute sale societies and paddy sale societies in Bengal, Commission shops in the Punjab that have been started are negligent compared to the total volume of agricultural trade and affects very small number of cultivators. The Central Marketing Board should direct its energies in fixing the grade standard of crops, providing cold storage marketing facilities for fruits, milk and frozen foods, etc., and should impress upon the Government to revise its railway freight rates with a view to removing any anomaly and adjust rates between various kinds of produce according to their ability to bear.

9 *Establishment of Co operative Societies and removal of indebtedness* The Co-operative movement was introduced in India in 1904 with a view to provide credit facilities to agriculturists whose economic condition had become extremely depressed and who were crushed under debt. But the main objective of the co operative movement in India has been frustrated inasmuch as the indebtedness of the peasant has gone on continually increasing and the total agrarian indebtedness now amounts to approximately Rs 900 crores. In India, the energies and attention of the authorities of the Co-operative Movement have been centred from the very beginning for developing the credit Co-operation, giving less attention to the development of other branches of the Co-operative Movement which are equally essential in inculcating the ideas of self help, brotherhood and common fellowship amongst agriculturists and making them independent of external agencies which exploit them. Side by side with the development of credit co operation in rural areas, it is equally essential that the Co operative Sale Societies which collectively sell the agriculturists' produce avoiding middlemen's profits, Purchase or Supply Societies which enable agriculturists to obtain their supplies of agricultural implements, fertilizers seeds, etc., at

moderate prices of guaranteed quality, Agricultural Production Societies such as, Poultry farming, Dairies or Milk Societies, etc., etc., should be immediately started in order to make the agriculturists more business-minded and bring the latent possibilities of the movement for their benefit. The problem of liquidation of debts is a very complicated one and more than one scheme have been suggested by various schools of thought in order to redeem the agricultural industry from the clutches of *Sahukars* and money-lenders, but so far no bold and active step has been taken by any of the Provincial Governments. This problem now requires to be tackled in a very comprehensive and constructive manner inasmuch as various legislations passed from time to time in order to relieve the agriculturists from the shackles of the *Sahukars* have resulted in making the money-lenders and *Sahukars* more exacting and revengeful.

10. *Improvement of live-stock and development of Dairy Industry.* The importance of cattle wealth cannot be over-emphasized in the agricultural economy of India. Bullock power is used for ploughing fields and sowing crops, for drawing water from wells for irrigation purpose, for threshing corn and crushing sugarcane, linseed, etc., for marketing agricultural produce and carrying passenger and goods traffic. The cow and she-buffalo provide milk and milk products which are very valuable articles in the diet of the country. It is believed that the live-stock of agriculturists has much deteriorated due to lack of grazing grounds, their growing diseases, uncertain and irregular supply of feeds and absence of facilities for breeding better type of cattle, and that a large number of old and useless cattle are allowed to flourish at the expense of serviceable ones. The improvement and development of cattle is urgently needed in the scheme of rural uplift as they constitute one of the biggest items of the agricultural capital and any loss of cattle due to lack of stamina or improper feeding compels the cultivators to borrow because in their absence hardly any agricultural operation is possible.

There are two lines along which the live-stock needs improvement—improvement of pedigree and provision of

adequate feeding It is now almost accepted by experts that the real improvement and development of cattle in India can be effected by taking up important and selected indigenous breeds of the country and by feeding and rearing them in a more proper and scientific manner It is as well realized that the system of cross-breeding is not suited to the cattle power of India, as this system has introduced many bovine diseases formerly unknown to the country and secondly it spoils the stamina of Indian cattle

It is very important that in a particular selected area in which stud bulls of high pedigree are kept, all the village scrub bulls should be castrated by the new bloodless method of castration in order to stop their breeding propensities and a vigorous campaign should be started by the Rural Development Societies of impressing upon the villagers the evil consequences that follow in the development of live stock by their leaving bulls in the name of religion

The question of feeding comes next and the influence of good and regular supply of feeds in the maintenance of health and productive capacity of cattle is equally important For a good supply of fodder grazing grounds and pasturage should be allotted as far as practicable where nutritious grazing grasses can be grown for cattle feeding But in the thickly populated agricultural tracts where every small field has been brought under the plough, the most suitable and economical method of providing an adequate and regular supply of fodder is mixed farming with fodder crops such as Jowar, Oats and other leguminous crops for cattle feeding In India owing to the periodic nature of rainfall, it is not possible to have regular and adequate supply of green or soft juicy fodder throughout the year In order to remove this defect the method of silaging the surplus supply of grass and fodder through the construction of silos should be adopted and given a wide publicity in the rural areas It is said that such preserved fodder even if taken out after four or five years is relished by cattle The development of dairy industry will also lead to the breeding of better cattle and as such the organization of the dairy industry which

awaits immense possibilities of development, should precede any attempt in the improvement of the cattle of the country.

11. *Provision of schools, libraries and recreation facilities in villages.* Apart from the important and most engaging question of the establishment of right sort of schools in the rural areas for removing the deep illiteracy of the masses and making them more cultured, efficient and capable of successfully solving the problems of life and protecting themselves against the undesirable exploitation, the problem of providing those amenities of life and facilities for recreation which should help in building up of strong nation and virile youth equally stands in prominence for urgent solution at the hands of those who are engaged in the work of rural uplift. At the present time facilities for recreation and amenities of life in Indian villages are conspicuous by their absence and the cultivator remains engaged in his occupation without any ambition, interest or zest in his life. During the transitional stage when the Indian village life has disintegrated in every aspect, most of the rural entertainments have lost their significance. Religious festivities and village festivals and other entertainments of rural life which used to provide villagers in bygone days with relaxation, produce healthy effect on their mind and body and keep them in bonds of unity, have now assumed a degenerated form wherein the ignorant are being exploited by the shrewd, and people have practically forgotten or are not able to understand the true significance and usefulness which characterised them in the past. It should be a very necessary item in the programme of rural uplift to reorganize and infuse new life in such festivals and other local entertainments which have at present fallen into disuse or are not followed in the true spirit in which they were conceived. The villager must be impressed upon of the educative value and the practical advantages which follow from such entertainments and festivals. For this purpose, rural libraries should be established and a campaign of reading and writing should be vigorously pursued; religious education and religious observances through *kirtans* (religious operas), etc, suited to each

occasion should be taught which will develop the spirit of truthfulness and honesty of purpose, gymnastics amongst the young boys and adult should be encouraged and athletic contests and competitions and rural sports should be organized in order to develop the qualities of service and sportsmanship. fairs and exhibitions should be organized in which articles of crafts, agricultural produce and modern labour saving devices should be displayed, which will be helpful in giving stimulus to the development of cottage industries and agriculture, cultural societies, such as dramatic or musical may also be encouraged for giving the villagers relaxation, village societies should also be organized and they should meet now and then to discuss their needs, their grievances and ways to remove those ills which retard their progress and the representatives of such village societies may conveniently meet in a district conference and thus extend the sphere of their influence and activity and make them alive citizens of the nation.

ORGANIZATION OF RURAL DEVELOPMENT SCHEME IN UNITED PROVINCES

The Rural Development Scheme initiated by the Government of the United Provinces is the outcome of deep thinking on their part and it is a laudable attempt inasmuch as it seeks to carry out economic, cultural, social and administrative reforms on sound lines in a comprehensive and systematic manner for the rural population of the province living almost always in a state of precariousness and almost under grinding poverty. The roots of the Scheme lie deep in self help and mutual help and the co operation of official and non official elements has been secured to bring about a change in the psychology of the peasantry by pointing out how a change from the age long practices would be advantageous to their interests and how they themselves are ultimately responsible for achieving permanent good results under the advice and guidance of official and non official agencies set up for the purpose.

The organization of Rural Development consists of a *Better Living Society* in each village, a *Union* of such

Societies for each Unit, a *Rural Development Association* for each district and a *Provincial Rural Development Board* at the apex for the province which helps to ensure the co-ordination of various development departments. The Staff consists of a *village guide* for each village, an *Organizer* for each unit, an *Inspector* for each district, a *Divisional Superintendent* for each division and the *Rural Development Officer* with his Secretariat at head quarters of the Government.

Better Living Societies. The success of Better Living Societies and their effective working for securing good results in villages depend to a considerable degree upon the organizing ability, honesty of purpose and enthusiasm of the Organizer who should be instrumental in making the people realize the need for the establishment of the *Better Living Society* in their village by pointing out to them its aims and objects and the advantages derivable therefrom after critically examining whether the economic condition of the village for which the Society is to be started justifies its organization. When a Better Living Society for the village is formed, it elects its own Panchayat including a *Sarpanch* and Secretary. The main duty of the Organizer during the course of elections to such Panchayats is to see that all the different interests have been suitably represented and that the election has not degenerated into a greed for obtaining power and increasing the spirit of factiousness which would rob the panchayat of its real mission. Much of the success of the elementary conveniences and the improvements of economic interests of its members sought to be provided by the Panchayat would depend upon the sense of duty and impartial character of the *Sarpanch*, the honesty and enthusiasm of the Secretary who acts as a village guide and "a sort of liaison Officer between the Local Officers of the different departments and the village people." Any scheme of social reform or economic improvements meant to be introduced in the village is first discussed in the Panchayat and recommended for adoption. For financing such schemes, the Panchayat obtains necessary funds from the villagers themselves and the balance from the Union in the shape of a grant. Thus, Better

Living Societies are purely non official in their character with elected Panchayats and if the Panchayat by enlisting the co operation, goodwill and confidence of all the different parties of the village carries out its schemes of reform and improvement under the sympathetic support and expert guidance of the government officials, there is no reason why the backward conditions of villages shall not improve and show betterment in all directions within a reasonable period of time

Union and Organisers In a particular selected area, 20 to 30 Better Living Societies with a total population ranging from ten to fifteen thousand form themselves into a *Better Living Union* and the Sarpanchs of the village Better Living Societies form the general body of the Union out of which a Union Panchayat and a Sarpanch of the Union are elected by the general body for co ordinating the different developmental activities in the Unit and for ensuring that the local Officials carry out the development schemes in a systematised manner. On the Union Panchayat the local officials of the different departments such as agriculture, Veterinary, Co operative etc., are represented as ex officio members. The executive Officer of each unit is the *Organiser* who is paid Secretary to the Union

The duties entrusted to an *Organiser* are very important and wide provided he is zealous in his work his activities would cover every aspect of rural development. The *Organiser* is required to carry out the spade work in every direction of village activity e.g., agriculture, cattle welfare cottage industries, Co operative Credit and Marketing public health, education and irrigation facilities, though the actual work is carried on under the supervision of the department concerned. He is a connecting link between the villagers and the departmental officials and brings difficulties or drawbacks of any nature experienced by the former to the notice of the latter and thereby helps in their removal. Besides these functions, he has to remain in constant touch with the villagers and impress upon them the necessity of raising their standard of living by giving them occupation in some profitable activity, for instance cottage industries

ment, five members elected by the Legislative Assembly, two by the Legislative Council and other non officials interested in the development of rural conditions

As much initial and important work of instruction and propaganda of agricultural development in the villages is entrusted to the charge of Organisers in their respective units, the Government have started six training camps where Organisers are given instruction in Agriculture, Cooperative Organizations, rural housing and sanitation, cattle welfare, first aid, cottage industries etc

The Development Board within a short period has achieved good results in agriculture, fruit culture, removal of illiteracy, fuel plantations, raising grazing grounds for cattle, provision of more regular supply of water for irrigation and of wells for drinking purposes, cattle welfare, provision of travelling-dispensaries for the villages where no medical aid is easily available and improving the housing conditions and sanitation of the villages, and though only a beginning has been made so far, it can safely be said that, if the work is continued with the zeal which has guided the movement so far, the insurmountable task of rural development will be brought under effective control within a reasonable period of time and the utter poverty and rank illiteracy that are rampant in villages at the present time will become things of the past

CHAPTER XVI

EXCHANGE

The Meaning and Necessity of Exchange

In the most primitive societies, when members of each family produced independently the entire wealth for the satisfaction of their limited wants, there was practically no necessity of exchange. But in a modern industrial society in which productive activities are carried on indirectly through a minute and intricate system of division of labour and large-scale production, the subject of exchange has come to occupy a very important place in our economic studies. It is a necessary link connecting the chain of production and consumption. Exchange implies the transfer of goods among the members composing a society. In Economics, under the department of exchange we study the voluntary two-sided transfer of goods, the ratios at which goods change hands, and the mechanisms and institutions by which this arrangement is brought about. If Mahendra is willing to part with his watch in consideration for Pratap's tennis racket and Pratap is also prepared to part with his tennis racket, in order to obtain Mahendra's watch, an exchange between the two can take place. Thus, in an act of exchange there are two parties each of which after comparing the utility that would be lost on parting with a commodity and the satisfaction that would be derived on receiving another's commodity, voluntarily exchange goods for those of another.

The need for exchange arises out of the division of labour. Every producer now-a-days specializes himself in that branch of productive activity in which he finds himself comparatively most efficient and depends for the satisfaction of his various wants upon the system of exchange. As a rule, every person now parts with that amount of commodity or service of which he has a surplus and obtains by exchange that of which he feels a shortage.

In the absence of exchange everybody would have been obliged to produce all those things required by him with his own hands. It would have involved indescribable difficulties besides an enormous amount of wastage of time and resources. It is by means of exchange that the economic cycle of efforts and their satisfaction is made complete. Exchange has assumed such a growing importance that nearly all the wealth that is created is produced in order to be exchanged.

Advantages of Exchange

1 Exchange enables people and countries to utilize their natural resources to the best advantage. Each country specializes in the production of that commodity for which it is best fitted. This increases the National Wealth of the country.

2 Each man adopts that occupation for himself for which he has got the necessary inclination and aptitude. This increases the productive capacity of each individual worker.

3 It enables each country to dispose of its surplus products which would have been useless otherwise. At the time of calamities or wars or famines, we can easily depend upon the products of other nations.

4 Exchange enlarges the area of markets, increases the scale of production, and brings about many other improvements in machinery and methods of production.

5 We are enabled to get through exchange many commodities which we would not have consumed otherwise.

The Forms of Exchange

There are two forms of exchange, viz.,

I Exchange by Barter

II. Exchange by Sale and Purchase

1. Barter

If the transference of goods takes place directly, that is, by the direct exchange of commodity for commodity without the intervention of money, it is called *barter*. Even today, barter system of exchange is obtainable in those communities which are economically weak and commer-

cially undeveloped. In many of the interior villages of India, payments to field labourers and village artisans are generally made in kind and not infrequently, a zamindar is seen exchanging his bullock directly for a horse of another without the intervention of money.

Inconveniences of Barter

As a result of the growth of division of labour and the consequent economic interdependence of persons for their mutual gratification of wants, the inconveniences attendant upon barter system of exchange began to prove a great clog in the progress of the community by obstructing the exchange of marketable articles freely and quickly. The main difficulties and inconveniences involved in exchange may be briefly summarized thus :—

(1) *Lack of double coincidence of wants.* The fundamental inconvenience of barter, as Prof. Chapman writes, arises from the fact that, for each act of barter, a double coincidence of wants is a prerequisite. By this expression we mean that before an exchange of goods can be effected directly, 'the man who has a superfluity of one thing and wants another, must find a second person whose superfluity and want are reciprocal to his own.' Thus, a farmer who has superfluous wheat and wants to exchange it for cloth, must not only search for a cloth dealer, but for such a cloth dealer who has the superfluous cloth and at the same time the willingness to have his wheat in exchange. This sort of search from door to door, before barter can take place, involves a tremendous amount of botheration and an incalculable loss of time.

(2) *The awkwardness of accommodating units of sales to units of purchases, or the difficulties of division and subdivision without loss of value.* The second important difficulty experienced in exchange by barter is that of accommodating units of sales to units of purchases. Supposing, a cultivator who has a surplus horse with him wants to get in exchange by the system of barter twenty yards of cloth, a *chersa* (a leathern bucket), four spades, eight sickles, two rough blankets, and a few other sundry articles, it seems well-nigh impossible for him to find out a person who can supply him all his requirements and

accept in exchange his surplus horse. If he is not able to hit upon such a person, naturally he cannot be expected to part away with two legs and two ears of his horse in exchange for, say two blankets, as the value of the whole will be destroyed by thus chopping away a smaller portion from the complete unit. Thus, the difficulties of sub-division in exchange without loss are clearly manifest in a system of barter exchange.

(3) *Want of a common denominator of value* The third great difficulty arises from the fact that in a state of barter there is no provision for a common denominator of value by which we can measure and compare the values of the different goods to be exchanged. As every commodity, in the absence of a common medium of exchange, has got to be exchanged for a large number of commodities all differing in kinds and values, therefore, much difficulty is experienced in settling about the rate at which exchange of goods should take place, and even if we were to furnish a list indicating the value of each commodity in terms of nearly all other exchangeable commodities, it would form a most lengthy, complicated and an almost impracticable process. The result is that there is an endless higgling over the settlement of the bargain and consequent waste of time to the exchanging parties.

II. Sale and Purchase

These difficulties and drawbacks led to the introduction of money as a common medium of exchange and the division of one exchange transaction into two separate and distinct operations, called "sale and purchase". This system has facilitated exchange to a remarkable degree. By this method we are no longer required to exchange goods for goods and put to any difficulty in the search of a man who can satisfy our diverse requirements. People now sell their articles and services for money and with it they purchase all the necessary articles required by them. The former of these exchange transactions is called *sale*, and the latter *purchase*. Thus, under the system of sale and purchase goods are transferred with the intervention of money and as such the value of commodities is now expressed in terms of money paid for them.

Both Parties gain in Utility by Exchange

It must be emphasized at the outset that in an act of voluntary exchange there accrues a gain to both the parties, unless one party is abnormally weak or ignorant. In the following illustration, it will be shown how both parties tend to secure a gain in utility in an exchange transaction. Let us assume that two farmers one having a stock of rice and the other possessing a stock of sugar want to exchange some amount of their commodities between themselves. For the sake of brevity let us call them A and B respectively. Now A has a stock of rice but wants to have sugar; while B has sugar but wants to have rice. Before an exchange transaction takes place between the two, each will compare the degree of satisfaction to be derived from the quantity of a commodity to be gained and the satisfaction lost by parting with a certain quantity of a commodity. If the satisfaction expected to be derived from the incoming commodity is at least equal, or outweighs the satisfaction of the outgoing commodity, an act of exchange between the two may be effected. If after the usual process of bargaining, A consents to part with one maund of rice for one maund of sugar and B also agrees to exchange one maund of sugar for one maund of rice, it clearly shows that A expects to get at least equal or greater utility from one maund of sugar than from one maund of rice already in his possession, and B also expects to obtain at least equal or greater satisfaction on receiving one maund of rice from A than on keeping one maund of sugar with him. Hence, there accrues a mutual gain in utility by exchange because by this process both parties get that commodity the utility of which to them is higher than that of the commodity which they give in exchange. The following table illustrates the above fact:

Units	Utility of Rice to A	Utility of Sugar to A	Utility of Rice to B	Utility of Sugar to B
1	70	80	90	70
2	50	60	60	60
3	30	30	30	30
Total Utility	150	170	180	160

A by exchanging 3 units of rice for 3 units of sugar gains 20 units of utility, similarly B gains 30 units of utility by exchanging the 3 units of sugar for 3 units of rice -

It used to be argued that in exchange if one party benefits, the other party must necessarily lose. This belief, however, is erroneous. In continuation of the previous illustration it may be repeated that A has a stock of rice and B that of sugar—in excess of their own requirements. In the absence of any exchange, if both of them were to continue the consumption of their own commodity it is sure, according to the Law of Diminishing Utility, the utility of the successive units will go on continuously diminishing and the marginal utility may fall to zero, if the stock of the commodity happens to be too large. A has a surplus stock of rice and as such it will have smaller degrees of utility than sugar which he keenly desires to have. Side by side B has a surplus stock of sugar and as such it will have smaller degrees of utility than rice which he strongly wants to possess. Hence the utility of one maund of sugar to A and of one maund of rice to B must be very high as in each case the incoming commodity satisfies a much stronger and more intense desire. By giving one maund of rice and receiving one maund of sugar, A loses less utility in the deprivation of rice than what he obtains in the acquisition of sugar. This and so on equally to B as well. Thus, in

view of the fact that a commodity having less utility is being exchanged for a commodity having a higher utility there is an accretion of utility to both the parties. Similarly, if the exchange transaction is carried on through the medium of money, the utility of the commodity purchased is at least equal if not greater than the utility of the money given. If that is not so, no exchange can take place. Jevons has, therefore, defined exchange as the "barter of the comparatively superfluous for the comparatively necessary."

The Meaning of Value and Price

The term 'value' is used ordinarily in two different senses, viz., (1) value in use, and (2) value in exchange.

'Value in use' expresses the utility or importance of some particular object. It is a subjective phenomenon and refers to the want-satisfying capacity of a commodity. When we say that iron is more valuable than gold or that the value of wheat is greater than that of diamonds, we mean, thereby, that iron and wheat are more useful and important as they satisfy more urgent wants than gold and diamonds.

'Value in exchange' of a commodity means the power of its being exchanged for other commodities. In short, it means the quantity of other things that can be had in exchange for the thing offered at any given time and place. It is an objective phenomenon and refers to the rate at which the commodity exchange for others. For instance, if two portable gramophones are exchanged for one portable Remington Typewriter, we say that the value of two gramophones is one Remington Typewriter and that of a Remington Typewriter is two portable gramophones. Therefore, 'value in exchange' is a relative term and implies the relation between two commodities at a particular time and place. If a commodity can command in exchange for itself a large quantity of other things at a particular time and place, its value is high; if at any other time it secures in exchange only a smaller quantity of other things, its value is low.

In order to avoid ambiguity and confusion it is thought better by economists to restrict the use of the term

2. Means of transport and communication such as roads, railways, navigable rivers, telephone, telegraph and radio, etc., which enable a cheap and rapid transfer of commodities from a place of plenty to a place of scarcity.

3. Markets where the exchanging work is carried on.

4. Money which is designed to serve as a medium of exchange. The superstructure of banking and credit is also based upon the existence of money.

CHAPTER XVII

MARKETS

The necessity for exchange and markets arises only when division of labour is introduced in the economic and industrial activities of a society and when each producer begins to engage himself in that special branch of productive activity in which he finds himself relatively efficient. Each producer now specializes in some particular calling and exchanges his products and services for the products and services of others through a common medium of value as accepted by the society. In modern times almost every producer produces for selling or marketing his produce. As a rule it may be affirmed that every effort directed toward the specialization of production results in the creation of further opportunities for exchange and marketing. Hence, the exchange of commodities and the presence of markets where the exchanging business among a group of buyers and sellers is carried on, have come to be regarded as important features of our modern economic life.

Definition of a Market

In popular language, the word 'market' refers to a particular place, building or enclosure where sellers and buyers with several kinds of articles congregate for the purpose of sale and purchase. In Economics, however, the term market is not confined to any particular locality nor does it refer to any market place where all kinds of provisions and other goods are offered for sale and purchase, but it chiefly refers to a particular group of buyers and sellers of any commodity who compete so closely with one another that the price of that commodity tends to be the same throughout that region in which they are found to be scattered. *Carnot* defines a market thus: "Economists understand by the term *market* not

any particular market-place in which things are bought and sold, but the whole of any region in which buyers and sellers are in such free intercourse with one another that the prices of the same goods tend to equality easily and quickly." Or again as Jevons says: "Originally a market was a public place in a town where provisions and other objects were exposed for sale; but the word has been generalized, so as to mean anybody of persons who are in intimate business relations and carry on extensive transactions in any commodity. A great city may contain as many markets as there are important branches of trade and these markets may or may not be localised.... The traders may be spread over a whole town, or a country, and yet make a market, if they are, by means of fairs, meetings, published price lists, the post-office or otherwise, in close communication with each other." Thus, in a perfect economic market, where competition among buyers and sellers is in full play, there is a strong tendency for the same price to be paid for the same article at the same time in all parts of it, allowing for the cost of transporting it from one part of the market to another.

The conception of an economic market would not be complete if it is not explained that even for the same commodity there may be as many markets as there are different groups of exchangers engaged in the sale and purchase of that commodity, independently of each other. Thus, in respect of a particular commodity in a particular region there may exist different markets for it. 'The retail market in a commodity such as tea is quite distinct from the wholesale market in the same commodity. Retail grocers compete directly in one market to purchase tea from the wholesalers; but this market is quite distinct from that wherein the wholesalers themselves compete to buy supplies from the actual producers.'

The Evolution of Markets

The markets, in view of the expanding requirements of trade and commerce, have undergone various types of changes and improvements. The various stages in the development of markets have been classified into four divisions.

1 *Localization of markets* At a particular market-place, where buyers and sellers agree to meet for exchange transactions and where several kinds of goods are exhibited for sale, neither the sellers have to search for the buyers nor the buyers have to make a troublesome search for the sellers. On account of a close association and keen competition among buyers and sellers, the price of an article tends to equality for the same article at the same time, because the buyers, beyond a particular price ruling at one time, would not be prepared to pay a higher price, and sellers would also not like to sell below that price unless they can afford to do so. The extent of a localized market usually depends upon the availability of transport facilities.

2 *Dealing by sample* Before the introduction of the sale of goods by samples the sellers used to transport their goods to the market-place in the expectation that some purchasers would come forward to demand their goods. Buyers used to come and settle prices, and if the prices arrived at through bargaining and haggling proved somewhat unfavourable to the sellers, they seldom took their goods back as they had already incurred the expenses of transportation. These and other inconveniences are removed when the system of selling goods by sample is substituted for the actual goods to be sold. The sample can be handled and carried much more easily, and goods can now be sold in a distant market without their actual transportation in bulk. By this means the expenses of transporting goods are reduced or eliminated, the area of the market is increased, and competition becomes keener and much more effective.

3 *Dealing by grade* The system of marketing goods by grade was a further development in the growth of certain markets. There are certain commodities which can be conveniently classified according to their different qualities into several grades each differing in some respects from other grades. To each grade of a commodity is assigned a distinguishing mark or name so that the prospective buyers, without actually examining the commodity or its samples, can purchase in distant markets by simply quoting the name or mark of the grade which

they want. In the case of gradable commodities, like cotton, jute and wheat a resort to samples is rendered almost unnecessary. The introduction of selling by grade still further enlarges the area of the market and makes the market more perfect by making competition more effective within all parts of it.

4. *Differentiation or specialization of markets.* Originally the market is a mixed market in which several kinds of goods are exhibited for sale and purchase. But with the expansion of industrial activities and commercial requirements and the development of transport facilities, the market tends to grow more specialized. It no longer remains a mixed market, but for the sake of commercial convenience and efficiency it is divided into specialized markets, such as the fruit and vegetable market, textile market, grain market, *sharaffa*, etc.

Classification of Markets

Markets may be classified according to space or time and may be termed as Place Markets and Time Markets.

A place market refers to a region over which it extends. A time market refers to the duration of time taken by the forces of demand and supply to be completely adjusted.

Place Markets

A market in regard to area may be local, national or international. The area of competition governs the area of the market. If the competition in respect of a particular commodity is confined to the buyers and sellers of a particular locality, the market for that commodity is called a 'local market.' Generally, the market is local for that article which is perishable or bulky or which satisfies only an individual need or local requirement, e. g., vegetables, bricks and grass have a local market. Again, if the competition for a particular commodity is found among the buyers and sellers scattered over the entire country, then that commodity has a 'national market.' An international market is that market in which the competition among the sellers and buyers for the sale and purchase of a commodity is world-wide. Such commodities as gold, silver, wheat, sugar, cotton, jute, iron,

petroleum, etc., which are demanded all over the world have international markets

Time Markets

'Markets vary with regard to the period of time which is allowed to the forces of demand and supply to bring themselves into equilibrium with one another' According to time markets may be classified as follows —

(i) *The daily market* In a daily market the supply of a commodity is more or less fixed and cannot be changed in response to the changes in demand The price in the daily market is fixed by the temporary equilibrium of demand and supply in which the demand plays an important part while supply remains a passive agent As there is no time to increase or decrease the amount of supply to meet the increased or decreased demand, it is the utility of the commodity that fixes the prices of commodities

(ii) *The short period market* In the short period market, time is not sufficient to change the factors of production to meet the changes in demand Supply during a short period is variable to a certain extent only with the help of the existing factors of production, e.g., if the demand for a commodity increases, the supply will tend to increase by utilizing the less efficient existing factors of production and naturally the cost of production would tend to increase, and if there is a decrease in demand, only the most efficient factors of production will remain in service resulting in a lower cost of production per unit than before Thus, we see that in a short period market, supply is not as passive and fixed as in a daily market but still the demand plays a predominant part and fixes the prices of commodities

(iii) *The long period market* In such a market, all the factors of production get sufficient time to adjust themselves to the changes in demand Increased demand will be met by increasing the supply with the aid of the new factors of production while decreased demand is satisfied by decreasing the supply In short, there is a complete adjustment of supply to demand in a long period market. Supply plays a more prominent part and prices tend to the

level of the cost of production of the commodity. No producer would sell his commodity below the cost price; he will close his business instead of doing so. Similarly, the prices of commodities cannot be higher than their cost of production, as this inducement of an extra gain will tend to increase the supply of those articles to bring the prices to the level of the cost of production. Hence prices, in the long run, cannot be permanently higher or lower than the cost of production.

Boundaries of a Market

(i) Markets tend to grow wider in their extent with improvements in the means of transport and communication. Good roads, cheap railways, secure steamships, rapid air service, convenient telephony, telegraphy and radiography have all a noteworthy tendency to extend the boundaries of markets enabling the buyers and sellers, scattered over a wide region to obtain reliable informations regarding the present and the prospective course of the market prices. Before the introduction of these devices, the transportation of goods from one place to another was very slow, expensive, inconvenient and risky, in consequence of which, markets for many of the commodities barring a few articles of luxury were confined to the locality of their origin. Formerly, marked variations in rates were noticed even in the adjoining localities because of the high cost of transport and lack of any specific information regarding prices. But at the present day, free competition among buyers and sellers, rapid and regular means of transport and communication have made it possible for the buyers and sellers to compete with one another for the same supplies and to bring about an equalization of prices of the same commodity in all the markets.

(ii) A second condition necessary in the extension of markets is the existence of confidence, peace and security in the country. If there is perfect security from fraud and burglary, if the claims of creditors are respectfully recognized by the authorities, then dealers would not hesitate to send their goods, in case it is profitable to do so, even to the very ends of the earth. Hence, Governmental security and commercial honesty and stability are

and tea are world-wide, because they are in universal demand, and secondly because they have a very high value in proportion to their bulk and weight.

3. *Suitability for grading and sampling.* Those commodities which are cognizable and suitable for sampling and grading enjoy wide markets, as the purchasers without having any personal inspection of those commodities, can place orders in distant countries by quoting their distinguishing marks. As the grading is very frequently done by an independent expert authority, there are practically no possibilities of adulteration. Wheat, cotton, tea, jute and sugar are some of the important commodities which can be suitably classified and graded into separate classes as a result of which they can command very wide markets.

4. *Imperishability.* Perishable commodities like fresh fruits and vegetables, fish, milk and meat which cannot stand transportation over a long distance have a very narrow market. On the other hand, durable articles enjoy wide markets. For instance, the quality of barley and oilseeds will not undergo any deterioration, if it is kept for a long time and transported to distant countries. But it may be mentioned here that with the introduction of scientific packing, refrigerating vans and cold storage facilities the markets for perishable commodities are also growing wider and wider in their extent. It is due to the rapid means of transport and the scientific improvements introduced for the transit and storage of perishable commodities that many of the commodities have now come to acquire world-wide markets which were only a few decades back confined to the locality of their origin.

5. *Supply of the commodity.* An article the supply of which is limited cannot expect to have a wide market. For a commodity to have a wide market, it is necessary that its supply must be large.

CHAPTER XVIII

THEORIES OF VALUE

Having explained and emphasized the nature and the necessity of exchange and discussed the importance of markets, it now remains to be examined how commodities exchange hands and on what terms and conditions such an exchange ratio is determined. It may well be asked why a particular commodity is exchanged for a particular commodity, or for a given price and not for more or less price, and how an adjustment is brought about between the amount demanded and supplied in a market where every producer produces for sale irrespective of any previous arrangement or agreement with his fellow producers? Why do the ratios in which they exchange vary from time to time? These problems lead us to the consideration of the principles governing the exchange power of a commodity or service. Since the time Economics began to be studied in a critical spirit, various important theories have been propounded to explain the determination of values and prices. But in order to understand clearly the modern theory of value, a brief review of the preceding theories seems expedient at this place.

The Labour Theory of Value

Although expounded originally by Adam Smith and Ricardo, the Labour Theory of Value is generally associated with the name of Karl Marx, the great socialist thinker, who undertook great many pains in its exposition and development. Adam Smith regarded labour as "the real measure of the exchangeable value of all commodities." He states "Labour is the only universal as well as the only accurate measure of value, or the only standard by which we can compare the values of different commodities at all times and at all places." Ricardo held labour as 'the foundation of all value, and the relative

quantity of labour (applied to produce commodities) as almost exclusively determining the relative value of commodities;" while Karl Marx speaks that the "value of each commodity is determined by the quantity of labour expended on and materialized in it, by the working time necessary, under given social conditions, for its production." Briefly, the exponents of labour theory believe that value of anything is determined by the amount of labour that has been spent upon its production. Like Ricardo, Marx also recognized the presence of utility as absolutely essential to value, but due to its variability, he disregarded utility as a factor necessary in the determination of value.

The labour theory of value seems to be entirely untenable and impractical in its conclusions, on account of the defects reproduced below :

(i) If the amount of labour expended in the production of a commodity be regarded as the sole source and measure of its value, a very serious difficulty arises concerning the unit of labour that should be taken for purposes of measuring values. By what standard are we to measure and compare an hour's labour of an unskilled workman with an hour's labour of a clerk, the writer, the engineer, or the entrepreneur? Marx, in spite of his all ingenious arguments, could not give a satisfactory explanation of the standard by which various *grades* or *qualities* of labour should be evaluated and compared? The *qualitative* differences can hardly be reduced to *quantitative* differences.

(ii) It not only treats the problem of value from the side of supply ignoring altogether the vital factor of demand as a determinant of value, it also brushes aside the claims of all the factors of production except labour. Labour, we know, cannot produce anything without the co-operation of land and capital, and as the latter cannot be had freely, they must cost something to those who wish to harness their services.

(iii) If the value of a commodity is determined by the labour expended during its production, then why does the value show fluctuations from time to time after it has been produced and placed in the market? Nor, it gives any

explanation of the value of those commodities which, on account of their scarcity, bring high prices

- (iv) It does not explain the supposed "paradox of values" whereby things with relatively little usefulness may have high value in exchange and vice versa

The Cost of Production Theory of Value

Like the labour theory, the cost of production theory regards the problem of value from the standpoint of supply alone. The theory states that the value of a commodity is determined by the cost of the various factors employed in its production. Besides labour, it emphasizes and includes the services of other factors of production in the determination of values. Mill summarizes the theory in the following words: 'The cost of production together with the ordinary profit, may, therefore be called the *necessary* price or value, of all things made by labour and capital

Obviously, this theory seems to be more precise and scientific in its exposition, as it states that under free competitive conditions, the price of an article must at least cover the cost of production if its production is to be continued. The high profits accruing from higher prices over cost tend to attract more competitors in consequence of which the supply gets increased and the prices tend to equal the cost, while the low profits tend to drive away the producers to more lucrative fields bring about a shortage in the supply and a rise in the prices

The cost theory, however, equally fails to provide a correct explanation of value and like the labour theory it is also subject to the following criticism

- (i) The cost theory treats the question of value from the side of supply only and ignores the side of demand or utility in the determination of value

(ii) It does not furnish any allowance for misdirected application of the factors of production. How can a machine built at an enormous expense of labour and capital command a value in the market, if it fails to move and work, or why the consumers should pay a high price for a particular commodity, if its cost of production is

made unduly high owing to the negligence or bad economy of the producer ?

(iii) If the value of a commodity is determined by its cost of production, then the theory offers no explanation for the value of those commodities which practically involve no cost of production. The price of such rare articles as famous pictures and statues and meteoric iron depends more on the demand of the consumers than on the cost of production.

(iv) The value of a commodity changes from time to time and from place to place. The cost of production theory does not explain why value changes after a thing has been produced and placed in the market for sale.

(v) The cost of production of a commodity varies from firm to firm and under free conditions of competitive forces one single price rules at a given time in a particular market. The cost theory fails to give a satisfactory explanation as to whose cost of production determines value though it is maintained by the exponents of the theory that the value depends on the cost of production of the marginal firm which just manages to carry on the production of the commodity.

The Utility Theory of Value

The utility theory of value, advocated by Jevons and the economists of the Austrian School, states that the value of a commodity is determined by utility or demand. It was considered by the exponents of this theory that the value of a commodity cannot go higher than the amount of utility to be derived from its consumption or acquisition, and if the value exceeds the prospective utility, the commodity would no longer be demanded as a result of which production would cease.

Like the labour or cost theory, the utility theory of value is one-sided, and is objected to on the following grounds :—

(i) It deals with the problem of value from the side of demand and overlooks the conditions of supply altogether.

(ii) If utility is the determining factor of values, the

value of a particular commodity of the same quality and quantity should vary from individual to individual as each man according to his wealth and intensity of his desire possesses different utilities for the article But under actual market conditions one single price rules at a time for the same article irrespective of the means and desires of the buyers

(iii) According to the utility theory the value of those articles (e g, food and drinks) which have comparatively high utilities should be high while the value of those articles (e g, diamond, gold and silver) which satisfy relatively less urgent wants should be low. But in actual conditions of economic life the value of a commodity is very often *inversely proportionate* to its utility. This goes far to contradict the theory

(iv) The theory in its modified form states that the value of a commodity depends on its final utility or marginal utility, i.e., the utility derived from the last unit of purchase. The price which a buyer is willing to pay for the marginal unit will be paid for all the units purchased by him at a given time. But marginal utility itself shows variability depending to a great extent on the price and the supply of a commodity. Hence, marginal utility by itself cannot govern the value of a commodity

Demand and Supply Theory of Value

The demand and supply theory states that the exchange value of a commodity is determined by the interaction of the forces of demand for and supply of that commodity in a market. In order to bring out the salient characteristics of this statement, it would be good, if we explain it by the aid of a concrete illustration

In every exchange transaction of a commodity there are two parties—a group of buyers and a group of sellers—each of which exercises a positive influence in the determination of value. On the demand side, the price of a commodity is determined by the utility to the purchaser, and if he is a sensible man he would, under ordinary conditions in no case like to part with an amount of money the utility of which is greater to him than that he expects to derive from the acquisition of the

units of a commodity. But the desire to obtain the commodity depends on its marginal utility, and, therefore, the demand price is measured by the marginal utility of the commodity to the buyer. If the marginal utility of the commodity falls below the marginal utility of money which he has to pay for in exchange, he will cease to buy it. For instance, a buyer contemplates to buy 15 oranges. All the oranges being identical and interchangeable the price which he consents to pay for the fifteenth orange—the marginal purchase—would be the price for each of the entire stock of the oranges which he agrees to buy at that particular time. If the utility of the marginal purchase is just measured by one anna and, if he is the only buyer in the market, then one anna will be paid for all the successive oranges purchased. It is not the total satisfaction but the marginal satisfaction that determines the marginal demand price. Therefore, the *maximum* price of the buyer is determined in relation to the marginal utility to him of the commodity beyond which he would not like to go in for it.

On the supply side, there are sellers engaged in the production and supply of the commodity, which naturally entails some sacrifices and expenses on the part of producers. The sellers would not like to part with their commodity below the amount it has cost them to produce or acquire. Hence, the cost of production or the money value of the sacrifices they have undertaken in producing and bringing the article to the market, fixes the *minimum* price below which they would cease to sell as any price lower than that would not remunerate them. Supposing the expenses of production to the orange-seller come to 3 pice per orange, then this sum will form the minimum price below which he will never prefer to sell.

Thus, the buyer has a maximum price beyond which he will never go, but he will try to pay as little as possible. The seller has a minimum price governed by the expenses of production of the commodity meant for sale but he will attempt to charge as high a price as possible. The actual price ruling in the market, at any particular time, will be determined by the relative urgency of the

seller to sell and the buyer to buy together with the relative bargaining capacity of each party. If the buyer's demand is urgent and if he does not prove to be very skilful in the art of bargaining, it is quite possible he might be made to pay the maximum price, i.e., four pice per orange. If on the contrary, the seller is in urgent need of disposing of his oranges and his impatience to sell his product is also realized by the buyer, it is possible he may, by his outward indifference, drag the price down to the seller's minimum i.e., three pice per orange. Marshall observes aptly "The price may be tossed hither and thither like a shuttlecock, as one side or the other gets the better in the higgling and bargaining of the market."

The above statement of the demand and supply theory of value, though simple and free from the complicated factors that we are to consider later on, is none the less quite true in essentials. In a market, where there is a heterogeneous group of buyers and sellers, the former having different tastes and means, and the latter having varying expenses of production owing to differences in their natural endowments and managerial accomplishments, the value of a commodity, on the demand side, tends to be determined by the marginal demand price of the marginal buyer, and on the supply side by the marginal supply price or marginal expenses of production of the marginal firm working under the most disadvantageous conditions, but whose contribution to the total supply is necessary to make the supply equal to the quantity demanded at any time. But it must also be pointed out that demand, supply and price act and react upon one another. Demand and supply are themselves affected by price. A rise in the price of a commodity tends to increase its supply and diminish its demand, on the contrary, a fall in price tends to decrease its supply and increase its demand. So the value of a commodity is determined at a point where the quantity demanded by the marginal buyers is approximately equal to the quantity offered by the marginal sellers.

Equilibrium of Demand and Supply . Market Price

By 'equilibrium of demand and supply' is understood

that state of the market, at any given time and place, when, through the competition of buyers and sellers, the price settles at a point at which the quantity demanded approximately equals the quantity offered for sale, and the exchange transactions take place between the two parties freely. Under such a state, the price at which transactions are carried on is called the market or equilibrium price and the quantity offered for sale and demanded at that price is called the equilibrium amount.

We have explained, elsewhere, the meaning of demand as an 'effective desire' of a commodity backed by the purchasing ability and willingness to use it. We also pointed therein how, according to the law of demand, the quantity demanded tends to increase with a fall in price, and tends to decrease with a rise in price, other things remaining the same.

By "supply" in Economics is meant the quantity of a commodity offered for sale in the market at a certain price and at any given time. Hence, *supply* has to be distinguished from *stock*. Stock refers to the total amount of a commodity available at any time while supply denotes the actual amount of a commodity forthcoming for sale at a given price. On seeing an unfavourable price, sellers usually keep back their stock in order to sell it at a favourable price. In the case of perishable goods like fish, green vegetables, etc., the stock and supply tend to approximate, because such commodities, owing to their perishability, cannot be withheld by the sellers for a long time. The law of supply states that with a fall in the price, other things remaining the same, the quantity of a commodity supplied diminishes while with a rise in its price its quantity offered at that price increases because even those producers who have produced their stock at a higher cost are enabled to place it on the market. As the price of a commodity falls, its supply diminishes for many of the sellers who were on the margin find it now unremunerative to sell at that price. A supply schedule, like the demand schedule, is a list of the varying quantities of a commodity that are offered for sale at different prices at any particular time and place.

Having explained the meaning of demand and supply and having determined their inter-relationship with the

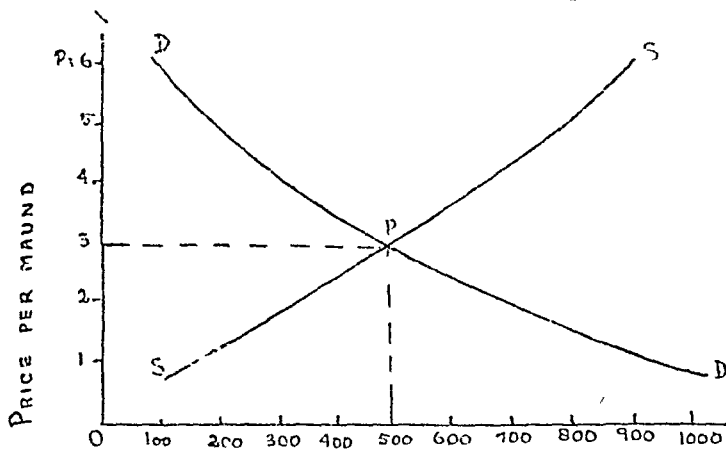
variations in prices, let us now seek to analyze the conditions under which the market price is fixed and an equilibrium is brought about in the market. Let us assume the case of wheat in a local market where buyers and sellers are found competing in its purchase and sale. Each buyer comes to purchase according to his individual demand schedule, and so each seller comes to sell according to his individual supply schedule. Each buyer has his own maximum price but seeks every opportunity to pay as little as possible. Similarly, each seller has his minimum price below which he will not sell his wheat but welcomes every opportunity in the way of securing higher prices than that. At different prices, different quantities of wheat would be demanded and supplied. Let us assume the following hypothetical market schedules of demand and supply on a particular day.

Buyers willing to buy (Demand)	At the price (Permaund)	Sellers willing to sell (Supply)
100 Mds	Rs 6	900 Mds
200 "	" 5	800 "
300 "	" 4	650 "
500 "	" 3	500 "
725 "	" 2	325 "
1000 "	" 1	150 "

The above demand and supply schedules may be graphically represented by demand and supply curves and the point of intersection will determine the point of equilibrium and the market price at that particular time.

In the diagram given on next page DD represents the demand curve, and SS the supply curve. On reading it, it will be obvious to the readers that it is at the point P that the supply and demand curves intersect each other, and that the quantity forthcoming for sale is just equal to the quantity demanded. That is, the market price settled through the interaction of the forces of demand and supply for the time-being is Rs 3 per maund. That at no other point there is any equilibrium of demand and supply at that particular moment proves the non-existence of any other price. It is not necessary that

all exchange transactions that take place on that particular day in the market are effected at this particular price. It is possible that some eager buyers might have purchased at a higher price while some eager sellers might have sold at a lower price than the market price, but eventually, through the competition of buyers and sellers, the price is so adjusted that the quantity demanded equals the quantity offered at that price.



MAUNDS OF WHEAT SUPPLIED OR DEMANDED

Determination of Market Price

Thus, it has been truly observed that the 'market price' is the price ruling in the market at any moment, and represents an equilibrium between demand and supply.' It varies from day to day and in some cases from hour to hour according to the changes in demand for and supply of a commodity. Market price is a very short period phenomenon, and as the supply is more or less fixed on a particular day and cannot increase or decrease in response to a rise or fall in demand, it is determined solely with reference to the demand or marginal utility of the buyers for the commodity. If demand rises, prices also rise; while if demand falls, the prices also fall. In the case of perishable commodities, the influence of demand in the determination of market prices is most prominent. The supply plays a passive part in the determination of market prices.

Normal Price

In our discussion of the market price, it was pointed out that it was determined solely with reference to demand and had no direct relation to the expenses of production. Market price is governed by the temporary relations of demand for and supply of a commodity at any given time. Normal price, on the contrary, refers to the price during some period of time—a short or a long period—which covers the expenses of production of the marginal supply of the aggregate production during that particular period. By expenses of production is meant the sums of money paid for the 'efforts and sacrifices' that are necessary to the production of a commodity, that is, for meeting the expenses of raw materials, depreciation of fixed capital, interest and insurance on all capital, wages of all kinds of labour, and earnings of management. The normal supply price in any period, under free competition must cover the expenses of production of the marginal firm whose supply on the market is necessary to make it equal to the quantity demanded. But in our dynamic society in which every factor—demand, supply, population, standard of living, methods of production, etc.—is ever changing, there is hardly realized a perfect equilibrium between the conditions of supply and demand, and hence, the normal price is reached only temporarily. If the economic conditions are static, that is, if demand is not disturbed by the changes in fashions, tastes and incomes of buyers, and if the marginal expenses of production or the supply are not being affected by such factors as new inventions and improvements in the methods of production, fresh accumulation of capital, improved means of transport and communication, etc., then the normal price tends to equal the marginal expenses of production. If the price is above the normal costs of the agents of production employed in producing a commodity, more producers will enter into competition putting forth an excessive supply on the market *relative to the demand there*, dragging the price downwards to the normal price. Conversely, if the price falls below the expenses of production the supply will be shortened, and the price will rise again. Normal price of commodity is the pivot around which its market price oscillates.

The distinction drawn formerly between the market price as corresponding to the "short period" and the normal price as referring to the "long period" is no longer accepted as a scientific conclusion. In fact, normal supply price exists both in the short and long period markets, and variations in normal prices take place in the long run, in accordance with the laws of productivity. Marshall states: "The normal or natural value of a commodity is that which the economic forces tend to bring about *in the long run*. It is the value which the economic forces would bring about if the general conditions of life were stationary for a run of time long enough to enable them all to work out their effect."

Short and Long Periods

The terms short and long periods are very elastic, and are used in relation to the commodity under consideration. What may be regarded as a short period for one commodity may be taken as a long period for another commodity. A short period is that period in which no sufficient time is available to increase or decrease the factors of production in response to a rise or fall in demand. For example, the supply in a short period in response to a rise in demand cannot be increased with the existing factors of production so as to meet the demand fully. In short period the supply will be adjusted by bringing into use the obsolete and discarded machinery, and by working more intensively on the existing plant with unskilled labour with the result that the cost per unit will rise. But the short period normal price has a marked tendency to equal the expenses of production under abnormal conditions.

A long period, however, denotes a sufficient time in which the factors of production can be increased or decreased in response to a rise or fall in demand. In the long period the price of a commodity is influenced not by the expenses of production determined by the existing appliances of production, but by the expenses of producing specialized skill and ability, suitable machinery and other material capital required for producing the commodity. In long periods the economic forces of demand and supply

get sufficient time and opportunity to adjust themselves more thoroughly

The Short Period Price

The short period normal price refers to the price which covers the cost of the marginal supply during the short period. As the existing factors of production cannot be varied and fully adjusted due to the changes in demand and price during a short period, demand tends to exert a greater influence on the determination of the price of a commodity while supply plays no more than an indirect part in the determination of price.

If the demand for a commodity increases leading to a rise in price, producers, in order to take advantage of the high price, will increase its supply to some extent by manipulating the existing factors of production, but as the increased supply is obtained at a higher cost per unit due to the abnormal conditions of production, the normal supply price will tend to increase than before the rise in demand took place. Other things being equal, an increased demand increases the supply in the market and raises the normal supply price in the short period.

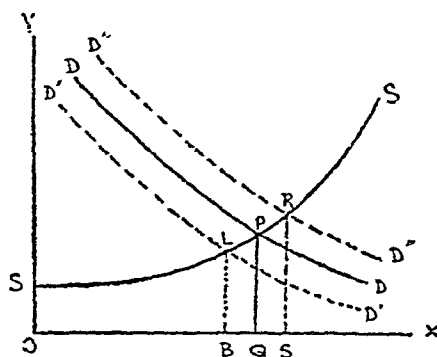
On the other hand, if the demand for a commodity diminishes during the short period, the supply will have to be curtailed by keeping a portion of the factors of production idle but without transferring the existing surplus factors of production to other more profitable productive enterprises. Moreover, it takes also some time to reduce the scale of production. Prices will tend to fall because the existing factors of production cannot be given a full employment and supply cannot be adjusted to the new conditions of demand in a short period. Hence it may be concluded that a decrease in the quantity demanded leads to a fall in the price during the short period. The extent of the fall in the price depends on the nature of the commodity. If the article is of a perishable nature the fall in the price may be very rapid while if the article is storable the fall may be only a slight one. Although the influence of demand in the determination of the short period normal prices is very dominant, the influence of supply is no less prominent for the producers tend to adjust their supply to the

demand as best as they can with the available appliances of production.

The Long Period Price

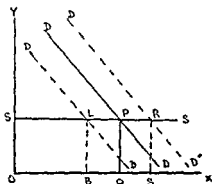
During long periods in which the factors of production can be increased or decreased in response to an increase or a decrease in demand, the normal price tends to equal the expenses of production of the marginal supply. Normal price in the long periods is the result of more stable conditions and permanent causes, as the adjustment of supply to the changed conditions of demand can be effected much more completely and efficiently. *The rise or fall of normal prices during long periods depends upon the changed conditions of supply and the laws of productivity.*

If a commodity is produced under conditions of increasing costs (or, diminishing returns), the cost per unit of supply increases. The long period normal price will rise with an increase in demand and fall with a decrease in demand. When the demand rises (represented by the $D''D''$ curve) from OQ to OS the normal price rises from PQ to RS . Again, when the demand falls (represented by the $D'D'$ curve), a diminished amount of supply will be obtained at a less cost per unit, and the normal price will fall from PQ to LB , which is smaller than the old price.



Normal price under increasing costs

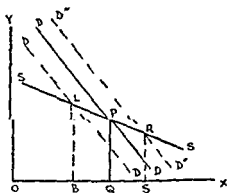
If the production of the commodity is subject to the Law of Constant Costs (or, constant returns) an increase or decrease in the supply will not affect the price, as



Normal price under constant costs

each successive unit can be had at the same cost. In case there be a rise or fall in demand the price will be RS and LB respectively which is equal to the old price PQ .

Let us now examine the normal price of a commodity subject to the Law of Decreasing Costs (or, increasing returns). As the quantity demanded increases, increased supply can be obtained at a less cost per unit of production through economies accruing from large scale production, suitable business organization, and better industrial management. Hence, a rise in the demand for a commodity, subject to decreasing costs, leads to a fall in price during long periods. The normal price will



Normal price under decreasing costs

be determined by the marginal firm whose output is required to meet the supply. While if the demand falls, the price rises as the smaller quantity of production is obtained by the producers at a higher cost per unit. $D''D''$ curve represents an increase in demand and the normal price RS is lower than the normal equilibrium price PQ. $D'D'$ represents a fall in demand, and LB measures the normal price in the long period which is higher than the normal equilibrium price PQ.

We may now summarize the influence of an increase or decrease in demand during short or long periods when the commodity obeys either diminishing returns, or constant returns, or increasing returns.

Nature of demand	Short period			Long period		
	D. R.	C. R.	I. R.	D. R.	C. R.	I. R.
Increase in demand	High	High	High	High	Constant	Low
Decrease in demand	Low	Low	Low	Low	Constant	High

Prof. Marshall sums up the theory of value in the following statement: "*As a general rule, the shorter the period which we are considering, the greater must be the share of our attention which is given to the influence of demand on value; and the longer the period, the more important will be the influence of cost of production on value. For the influence of changes in cost of production takes as a rule a longer time to work itself out than does the influence of changes in demand.*"

SPECULATION

These are the days of speculation and in the settlement and fixing of market prices speculation is a necessary factor. It is that form of business enterprise which induces people to buy and sell in future in the

expectation of a rise and fall in the prices of many important commodities. It is merely a dealing in differences. Many clever businessmen who have made speculation their main business are able to forecast with considerable degree of accuracy all the changes in the future prices of commodities, and thus regulate their purchases and sales with a view to earn sufficient profits. Many ill informed amateurs also speculate without possessing the necessary knowledge and foresight about the future movement of prices and bring about their early ruin. The present war has introduced a great deal of healthy and unhealthy speculation and has brought about the ruin of numberless amateurs and businessmen.

The real object of speculation is to bring about the equilibrium of demand and supply in the market and to stabilize the prices of many staple commodities. The healthy speculation helps to adjust present demand and supply to all the anticipated changes in those things and thus prevents large fluctuations in prices. Consumers and producers all gain by stable prices and adjust their demand according to the anticipated changes. Unhealthy form of speculation injures the interest of society by creating wild fluctuations in prices. It introduces the gambling spirit and affects all classes of persons very adversely. All attempts of the various Governments to check the evil have nearly failed. Unless some international agreement to limit the scope of speculation is brought into existence, no country can get rid of unhealthy speculation.

CHAPTER XIX

MONEY

The Evolution of Money X

The obvious difficulties and inconveniences involved in the barter system of exchange namely, the want of coincidence, the want of a measure of value and the want of means of subdivision, became manifest even in the most primitive economy, and at an early stage of civilization the community, in order to obviate all those difficulties, was forced upon to select by an express or tacit consent a commodity to serve as a basis for the measurement of values of various articles. In a community, where wants of the people are limited, division of labour is conspicuous by its absence, and everybody produces with a view to satisfy his personal wants, the use of money does not arise. However, with the development of trade, commerce and industry, money came into use on a wider and larger scale. The selection of a third commodity, serving as a medium in every exchange and accepted freely by each person in the belief that what he accepts in exchange will also be accepted by other persons, dispenses with the difficulties which one has to encounter in bringing about the double coincidence of wants in barter. And it is this commodity, acting as a medium of exchange in payment for goods and services in a community, which is usually known as 'money.' Any commodity, may be called 'money,' provided it is made to serve the functions of a common medium of exchange. Suppose by a common understanding wheat is selected as the common medium of exchange in a particular community. Under such circumstance, it signifies that wheat is no longer required for appeasing hunger alone but it becomes, as Walker aptly remarks, 'an intermediate thing in the commerce between producers and the consumers of any and of every article.' The general acceptability of wheat begins to

facilitate exchange transactions to the great progress of the society at large. The cultivator who has a surplus bullock to sell and wants in its stead cloth need not fritter away his energies in finding out the cloth dealer who requires his bullock and is ready to part with cloth in exchange, as he would have been obliged to do so under a barter economy, but he directly sells his bullock in the market in exchange for wheat by which he can purchase any other commodity he stands in need of. Thus, wheat becomes the general medium of exchange and in such a community wheat may be called money because the owner of wheat can realize its value in terms of other commodities which he wants for his satisfaction at any time.

Therefore, general acceptability determined the use of a commodity as money in a community. That one thing which was considered to be suitable, convenient and valuable at a particular time was adopted as a medium of exchange or money. At different stages of the economic development, different commodities either of a familiar use, or of an ornamental character have been used as money, e.g., skins and furs in the hunting stage, cattle in the pastoral stage, food-grains in the agricultural stage, and metals in the advanced economic stage. Articles of personal adornment like the wampum beads also served as a medium of exchange among Red Indians at the time when early colonists migrated to America. Tobacco leaf, packages of tea, dried coloured calico, cacao, cowrie-shells, etc., have been used as instruments of exchange in different stages and places in conformity with the mode of economic life maintained by their inhabitants. However, as society made progress in the sphere of trade, commerce and industry, these primitive forms of money proved inconvenient and were discarded for one reason or another — some were bulky and indivisible, whilst others proved perishable and unsuitable for storing value. In course of time precious metals notably gold and silver due to their better qualities came to be regarded as the most efficacious media of exchange and, in fact, in all the civilized communities of the world these money metals have been accepted as money.

Characteristics of a Good Commodity Money

Many forms of commodities used as money at one time or another were discarded because they were found wanting in certain essential characteristics which ought to be possessed by a money-commodity. In order that a commodity may effectively be used as money, it must possess the following characteristics.

1. *Utility.* A commodity must possess utility and value in exchange independent of its money use, so that it may have general acceptability. Gold and silver satisfy this condition, for apart from their monetary use, they are universally prized owing to their usefulness and relative scarcity. In some respects it is the most fundamental attribute of a money-commodity.

2. *Portability.* In order that money may facilitate exchange transactions, a money-commodity must be such as may be carried from one place to another easily and cheaply. In other words, it must have great value in small bulk. Gold and silver can be transported from one place to the other corner of the world at a very low cost in relation to their value.

3. *Durability.* The commodity should not only be durable but storable as well in order that it may effectively serve as a means of transference of value from one place to another and from time to time. If it is perishable and loses its quality or size through circulation or hoarding, it cannot serve as a common means of exchange. Gold and silver in their pure form do not last for a long time, but when mixed with alloy they imbibe the essential attribute of durability or indestructibility.

4. *Cognisability.* The commodity selected as the money-material must be capable of being quickly and easily recognized so that the chances of defraud or counterfeiting may be reduced to a minimum. Easy and quick cognisability forms an essential attribute of a sound monetary system.

5. *Homogeneity.* This quality implies that the physical divisions of the money-metal must be consistent and uniform throughout. Sheep, horses, skins or furs lack homogeneity as they cannot be divided into separate parts

in such a way that each part possesses a uniform value. Gold and silver have a homogeneous composition, hence they are suitable for the purposes of money.

6 *Divisibility* There are many articles which lose their value if they are divided into different parts. But gold and silver are composed of such a constitution that they do not lose their value on division into any number of parts and their different parts can be re-united without losing their original value. Precious stones lose their value when they are broken into separate parts and this is why they cannot serve as money.

7 *Malleability* A commodity serving as money must be malleable and ductile, i.e., it must be capable of being melted down, beaten and drawn out into desirable and convenient shapes, and imprinted with suitable designs. Gold and silver satisfy this condition in a high degree.

8 *Stability of value* The commodity must possess a stable value if it is to serve as money, for any rapid rise or fall in its value will bring about a corresponding change in the values of other commodities. Recurring fluctuations in the value of money prove invariably injurious to some groups of persons in a community, and a source of hindrance in the way of commercial and industrial progress. Therefore, in the interests of a sound monetary system the value of money commodity should show variations from time to time or from place to place as little as possible. That is to say, the purchasing power of money should remain fairly stable though perfect stability is an impossibility. Among the metals, gold and silver specially the former one has shown greater stability and steadiness in value because of the comparatively small annual supply, the existence of a large stock and a universal demand for it.

As all the above mentioned characteristics are found in gold and silver to the highest degree possible, they have been universally accepted as money metals to discharge the functions of money.

Functions of Money

From the inconveniences of barter, it is not difficult to form an idea of the functions of an intermediate com-

modity, commonly called money. Money, it must be understood, is not valued for its own sake but because its owner can claim on the goods and services of others in the community to the extent of his possession. Money, or different forms of it, today has come to serve as noted below :—

“Money is a matter of functions four,
A medium, a measure, a standard and a store.”

1. *Medium of exchange.* Easily it is the most important function of money as it removes all the unsatisfactory conditions involved in barter and brings about transference of goods and services with utmost convenience, rapidity and economy. It is in terms of money units that the values of other commodities are expressed. It has been truly observed that the present complex economic structure founded upon division of labour could not have achieved modern heights in the absence of efficient services of the labour-saving device of money. It is a general circulating medium of exchange and is accepted freely by everybody because everyone, accepting it in exchange of his goods and services, is fully confident of getting, thereby, the desired commodities he wants to consume at any time.

2. *Measure of value.* As every commodity is exchanged in terms of money, it becomes automatically a basis for the measurement and comparison of values of all goods and services, exchanged in terms of a common medium. Instead of saying that a certain person's wealth consists of so many different kinds of goods and services, his wealth is now measured in terms of money. The expression of value of an article in terms of other articles is made possible by the intervention of money, e.g., if ten seers of wheat are exchanged for one rupee and five seers of rice are also worth one rupee, then the ratio of exchange between wheat and rice is easily determined.

3. *Standard of deferred payments.* In a community loans are contracted for a variety of purposes and the repayment is generally made at a future date. If at the time of repayment, the purchasing power of money differs considerably from that possessed by it at the time of advancing the loan, then some injustice would be done

to either of the party concerned in the contract. In the selection of money-commodity, therefore, it is very necessary that its value should show the least variations though absolute stability in the value of money is not possible. But as all debts are incurred or repaid in money, it incidentally comes to serve as a standard of deferred payments.

4 *Store of value* Money can be stored much more conveniently and safely than many other kinds of goods. Firstly the storing of money does not require any large space nor does it suffer any change if kept for any length of time. Moreover, as money commands a universal acceptability and as its value fluctuates within very narrow margins, it can be converted by the holder, at any given time, into different forms of wealth for the satisfaction of one's wants. Formerly, money was hoarded but it is now generally deposited in banks, etc. From this point of view as well, it is necessary that the value of money should not be subject to heavy fluctuations, otherwise it will fail to act as a store of value.

Definition of Money

Like other terms in Economics, the term 'money' is also defined in a variety of ways. In view of the conflicting opinions expressed by different writers as to the nature and services of money, it seems somewhat difficult to frame a suitable definition of money.

Some writers have defined it in a very narrow sense while others have interpreted it in a much wider sense. In the former case, they understand by money as metallic money which has got an intrinsic value apart from its money used and exclude all paper money because it is devoid of any intrinsic value. In the latter case, they include all media of exchange—metallic money, paper money, cheques, bills of exchange, bank drafts and other negotiable securities. But this definition is too inclusive because it includes even those media of exchange which lack the quality of general acceptability and which are mostly acceptable in payment of goods or in discharge of debts among those parties which enjoy the confidence of each other, e.g., cheques and bills of exchange. Certainly, the important function of money is to act as a medium

of exchange but it does not necessarily follow from it that all media of exchange are money.

But the more moderate and common opinion implies by money as all media of exchange which are generally acceptable in full payment of goods or in discharge of debts, and which pass freely from hand to hand as media of exchange. Prof. Kinley restricts the term money to that part of the medium of exchange which passes freely in exchange and settlement of debts, without making the discharge of obligations contingent on the action of a third party or on the action of the payer by promising redemption if the money article does not pass.

The term money has to be distinguished from the term currency. The latter implies only those kinds of money which are issued by the State and which are used and accepted as a means of exchange only because their circulation is enforced by a legal authority. Thus, the currency system of a country is composed of all the different kinds of coins and papers with their relative values fixed by legal enactments. The Indian currency system is composed of metallic rupees, Government notes of various denominations, eight, four, two and one-anna coins, and pice, half-pice and pie (one-third of a pice). They are accepted by people in discharge of obligations because they know that others will also accept them in payment without any hitch.

Coinage

Prof. Kinley has defined coinage as the 'stamping of a piece of metal for use as money so as to make known its denomination and value directly, or by indicating its weight and fineness.' The manufacture of coins is done exclusively by the State which guarantees the weight and fineness of the coin issued from its mint and the designs stamped upon its surface enable people to realize its value.

In the earlier stages, gold and silver came to be used as rough ingots which had to be 'weighed and assayed' each time an exchange was effected. This double process of weighing and testing the purity of the metal resulted in a great inconvenience and an unnecessary delay of

exchange. Slowly, the rough ingots, after undergoing many evolutionary changes, came to be replaced by pieces of metal being impressed on one or both the sides with some official stamp or seal as indicating the weight and fineness of the metal. But due to the malpractices of 'forgers and clippers or cutters of coins' the uniformity of coins was spoiled as a result of which exchangers were again deceived and put to a lot of difficulty in examining their bulk and purity. Eventually, in every civilized State the Government took the exclusive responsibility of manufacturing coins and there are some positive advantages in keeping the coinage an exclusive monopoly of the State. The art of coinage has reached to such a stage of perfection that there are very few possibilities left for clipping or abrasion. The process of milling the edges has checked any tampering with the coin and that of putting a rim around a coin somewhat above the surface of the metal has imparted the desired durability. The Government issues coins from its mint with its own mark guaranteeing and certifying weight and fineness, value and denomination of the coin which is accepted by its people without any doubt in discharge of their claims.

Free and Limited Coinage

Although it has become one of the most important and responsible functions of the State to manufacture coins, the arrangements under which coinage is done differ from country to country according to conditions determined by its economic possibilities and historical traditions. A country may have either *free* coinage or *limited* coinage. If in a country mints are 'open' to public, that is, if people are allowed full freedom to get any quantity of their gold or silver bullion converted into the coins of the country, coinage is said to be free. On the other hand, if mints are 'closed' to the public, that is, if private persons are not allowed to get their bullion converted into coins and the Government on its own authority buys bullion, converts it into coins and issues them for exchange purposes, coinage is said to be limited. Since the closing of the Indian mints to the public in 1813, due to a heavy fall in the value of

silver, India has remained under a limited coinage system up till now.

From the term 'free coinage,' it must not be necessarily understood that gold or silver bullion presented to the Government mint by the public is converted into coins free of any cost. As a matter of fact, the Government may or may not levy charges for the cost of minting, the distinguishing criterion of free coinage being the unrestricted liberty to the public in matters of coinage of the standard money of the country. Under the system of free coinage we may have :—

(a) *Gratuitous coinage*, when no fee is levied by the Government for converting precious metals into standard money or coins.

(b) *Brassage*, when the charges levied by the Government are just equal to the cost of minting a coin. This system of free coinage is also known as mintage.

(c) *Seigniorage*, when the Government levies an extra charge over and above the cost of minting a coin and makes a profit out of the coinage. A seigniorage charge may be levied in two ways: (i) a certain proportion of the precious metal is taken out and the deduction is made good by substituting alloys, (ii) 'the coin may contain the full weight of precious metal, but a direct charge for the convenience of minting may be exacted from the person leaving the bullion for coinage.' The Government realizes seigniorage on every token coin issued under its authority and it decreases or increases with a rise or fall in the price of money-material. There is a heavy seigniorage of the Indian rupee.

Classification of Money

In the preceding pages, we have had an opportunity to point out that the currency system of a country is constituted of a variety of coins of different values. The metallic coins and paper notes of different values or denominations are manipulated in such a way as to meet the monetary requirements of the different groups of people inhabiting a country and to suit the varying scales of payment made in the course of a transaction. The rich and the poor live and work together in a society.

The poor generally make smaller transactions and in order to suit their scales of payment, coins of low denominations are necessary in a good monetary system, whilst for the rich coins of higher denominations are required in conformity with the nature of transactions and payments they are obliged to make

There are various kinds of money which may be classified as Standard Money, Token Money and Credit Money

1 *Standard Money* The standard money or coin is that money to which the values of all other kinds of money are adjusted and of which the value in exchange is determined solely with reference to the value of the metal it is made of. In other words, the standard coin is a full-bodied coin, the face value of which equals its intrinsic value. Standard money is generally subject to free coinage and it is always declared an unlimited legal tender, that is, it can be paid by the debtor to his creditor in discharge of obligations in an unlimited amount

2 *Token Money* The token money or coin is that money the face value of which is put higher by a legal order than the value of the metal contained in it. Its value bears a fixed ratio to the standard coin irrespective of variations in the latter's market value. Unlike standard coins, the token coins are not subject to free coinage and by restricting the manufacture and supply of token coins, the Government maintains their circulation at their face value. They are generally made of baser metals than the standard coin and are issued to the public for facilitating smaller transactions of comparatively low value. The right of coinage rests solely in the hands of the Government and a considerable profit is made by the treasury by manufacturing such coins but it seldom issues them in excess of the economic requirements of the country. Finally, token coins are limited legal tender, i.e., they can be paid by debtors in discharge of debts only to a limited extent. For example, token coins in England are limited legal tender for forty shillings. In India the four anna, two anna and one anna pieces are declared legal tender up to the amount of ten rupees, that is, a creditor has the right to refuse the acceptance,

Government in such a manner as to be in thorough consonance with the economic and industrial progress attained by that country. Countries which are highly developed from the economic, commercial and industrial standpoints, have evolved a very complex, expensive and heterogeneous type of currency. In comparatively poor countries where trade is little developed and industrial activities are very few the currency system is very simple. A good system of currency is that in which the purchasing power of money remains fairly stable over long periods and which inspires confidence in the public, encourages savings and the formation of capital, increases the quantitative production of wealth, stimulates trade and commerce and brings material welfare to the country.

The metallic currency may broadly be divided into two categories

- 1 Monometallism, or the single metallic standard
- 2 Bimetallism, or the double standard

Let us examine briefly the special characteristics of each system

Monometallism

A currency system in which only one metal is coined to function as principal or standard money and it is declared unlimited legal tender is called monometallism, and the country is said to be a monometallist country. Monometallism may be of either gold or silver. If gold is adopted as the basis of currency, that is, if all values are measured in terms of gold, and gold coins serve as standard money, then the system is known as the Gold Standard. While if silver forms the basis of the standard of value, then the system is called the Silver Standard. Monometallism has come to mean gold standard for all practical purposes because, till recently, the currencies of all the important countries of the world were on a full gold basis. *Gold Standard implies free coinage, free circulation of gold coins as unlimited legal tender, and an unrestricted export and import of gold.* If these conditions are not fulfilled by the currency system of a country, then it no longer claims to be on the gold basis. But under monometallism, it is not necessary that the coins of

only one metal should remain in circulation. Paper currency notes, token coins, cheques, etc., also circulate and serve as media of exchange but all values including the values of all subsidiary coins, are determined in relation to the standard coin. Currency notes are accepted generally in all amounts in payment of all debts and obligations as they are convertible on presentation at any time into standard coins. Token coins also circulate as media of exchange for smaller transaction and payments but their coinage is limited and they are declared by law as legal tender for fixed amounts. Under monometallism or the single legal tender system, the mint is open only for the coinage of standard coins; the mint value of the coin and the market value of the metal are the same.

Bimetallism

A currency system in which two metals, usually gold and silver, are used as standards of value, and both are subject to free coinage and declared unlimited legal tender to discharge obligations, is known as bimetallism. Under bimetallism or multiple legal tender system, the manufacture of both gold and silver coins is done gratuitously or at a very nominal charge by the Government, and a fixed ratio of exchange between them is determined legally. Thus, free coinage, full legal tender and a fixed ratio between the two coins are the three essentials of bimetallism.

The advocates of the bimetallic system believed that by using both gold and silver as standards of value, there will be less disturbances in the value of money and the general level of prices than under a monometallic system of currency. But it is extremely difficult to maintain the legal ratio similar to that of the market ratio of the two metals as bullion. As a matter of fact, the chief defect of bimetallism lies in the absence of any machinery which can bring about a coincidence for comparatively longer periods between the legal ratio fixed by the State and the market ratio of the two metals as bullion. In view of the variations from time to time in the values of bullion in the market, one metal or the other becomes overvalued or undervalued, as a result of which the cheaper metal in the market drives away the other metal from the currency.

The bimetallic system of currency was adopted in 1865 by the Latin Union consisting of France, Belgium, Italy and Switzerland. But owing to its unworkability in practice it was discarded in favour of gold monometallism and by 1890 nearly all the countries of the world except America adopted single standard as the basis of their currency.

Paper Money

In modern times side by side with the metallic money, we notice an extensive circulation of paper money serving the functions of a medium of exchange. In highly progressive nations of the world, paper money on account of its simplicity, convenience and economy is used for making exchanges and discharging obligations on a very considerable scale, thereby displacing standard money to the great relief of the community as a whole.

Paper money consists of the currency notes issued either by the Government of the country, or by a central bank under the strict control of the Government. In India, currency notes are issued by the Government of India but this function will now be taken over by the newly-constituted Reserve Bank of India. In England, paper money is issued by the Bank of England. In fact, currency notes are like token coins printed on paper but as they are usually declared legal tender for all amounts and backed by the promise of the issuing authority to convert them into rupees on presentation at any office of issue, they are generally accepted in satisfaction of all debts and obligations. As paper money has conferred some distinct advantages on the community using it, its circulation has found favour with all the progressive countries of the world. Paper money is broadly classified into two kinds, viz., (1) Convertible paper money, and (2) Inconvertible paper money.

1 *Convertible paper money.* Convertible paper money, as its name suggests, consists of paper notes which carry a promise of the issuing authority for conversion into cash on presentment by the holder. People generally accept such notes in satisfaction of debts and obligations in the belief that the issuers by virtue of their promise are bound to redeem them into specie (or, metallic coins) on demand. So long as the convertibility or the redeem-

tion as medium of exchange as suitably as the convertible notes or the metallic coins. But the temptation of issuing increasing quantities of such notes, irrespective of the business needs of the community, leads to a depreciation of the inconvertible paper money. The accompanying effects of such an unwise step prove very harmful to the country as a whole. Inconvertible paper is of two kinds. A paper may be declared inconvertible from the time of its issue. Such a type of inconvertible paper was issued by almost every country on the Continent during the War when there was a general scarcity of gold. Secondly, a paper may have been issued with the intention as a purpose of redeeming it, but later on, it may have lost its redeemability on account of the insolvency of the issuers. The Bank of England notes which were formerly convertible into specie, were declared inconvertible due to the financial stringency in 1931.

Merits and Defects of Paper Money

The chief merit of paper money lies in the fact that to the extent of its circulation in a country it makes metallic money available for use in other productive channels. A good amount of labour and capital is employed in the production of gold and silver, and if their use as money is dispensed with, it is sure that so much amount of saved labour and capital will be employed in the production of more necessary goods. Secondly, the cost of minting metallic coins, the loss by wear and tear of precious metals can be saved when paper money functions as a medium of exchange. Again, during periods of financial stringency a Government which cannot raise loans, inside or outside the country, without paying high rates of interest can issue more paper money thus, obviating the necessity of incurring loans. Finally, it is more convenient and less expensive than metallic money for making large payments in distant places.

Paper money is, however, subject to the following defects. The value of paper money is very precarious as its value, unlike metallic money, depends solely on the legal authority of the Government. If it is demonetized by law, the holder cannot get anything in its exchange.

sarily pay off their debts by passing on to their creditors fresh and full-weight coins. Again, when people hoard money they always tend to pick up fresh and glittering coins, because from the point of view of storability, they are considered to be more suitable. If coins were to be melted down for ornamental purposes, heavier coins will be taken out as they will be more valuable in bullion form.

2 In a bimetallic system of currency when gold and silver coin circulate side by side as full legal tender at a legally fixed ratio, the overvalued metal will tend to drive the undervalued metal out of circulation. The market value may vary from the legally fixed value. Under such circumstances, 'the tendency will be for the coin with a smaller market value as bullion to drive out of circulation the coins with a higher market value'. Supposing the legally fixed ratio of exchange between gold and silver is 1 : 15 while their market value becomes 1 : 17. In such a case silver coin is overvalued because it maintains a higher value in the form of coin than as metal, and the gold coin becomes undervalued because its mint ratio is 1 : 15 while the market value is 1 : 17. Gold coins will be kept back as their power of exchange is much superior in other uses than as coins. The currency will be flooded with overvalued metal, i.e., silver coins, and gold will be hoarded, melted or exported as bullion.

3 A third application of the same tendency is to be found when an inconvertible paper money is circulating side by side with metallic money, and both are declared legal tender for full amounts. If the inconvertible paper currency is issued in excess of the business needs of the community and there is no provision for redemption into metallic money, its value will depreciate in terms of metallic money. Everybody will try to pass on depreciated notes in circulation and retain metallic money with the idea that, if once parted with, it will be very expensive to secure it again.

Limitations of the law The operation of this tendency holds true under certain given conditions and is subject to the following limitations:

1. Firstly, if the full weight coins are token coins and limited legal tender, they will not go out of circulation.

because by legal enactment their face value is higher than the value of the metal contained in coins. Their use as coinage is more valuable as compared with their use as metal.

Secondly, if the aggregate circulation of good and bad coins in a community is barely sufficient to meet her commercial and industrial needs, then the good coins will circulate side by side with bad coins. People will have no temptation to withdraw good money from currency because it will command a higher value in coinage use. However, if at any time the currency requirements of the community are below the aggregate of good and bad coins in circulation, the better coins will be withdrawn to the extent that the two together exceed the requirements of the community.

Lastly, if the bad money has become so inferior in point of weight and fineness as to be rejected by people in payment of obligations, then bad money instead of driving out good money will itself be driven out of circulation. Scores of instances are on record when inconvertible paper money, extremely depreciated in value, was rejected by people and was driven out of circulation.

Appreciation and Depreciation

It has been already referred that perfect stability in the value of money is an impossibility; variations in the value of money are common phenomena of the business world. By the value of money is meant its general purchasing power in terms of commodities and services. The value of money, like that of other commodities, is determined by the relation between the demand for money and its supply at any given time. The demand for money arises due to the exchange transactions that are to be effected by money. Supply of money depends on the total quantity found in circulation at any given time. Like the value of other commodities, the value or purchasing power of money changes from time to time and from place to place according to variations in its supply and demand. It rises or falls proportionately with a decrease or an increase in the quantity of money in circulation at any given time.

A rise in the value of money means an increase in its purchasing power, that is, a unit of money now purchases a larger amount of goods than it did formerly, or less money is now needed to purchase a certain amount of commodity where more of it was required previously. For instance, if one rupee purchases now 12 seers of wheat or one seer of ghee or $2\frac{1}{2}$ seers of sugar instead of 8 seers of wheat, eight chataks of ghee or 2 seers of sugar which was the current ratio of exchangeability previous to the commencement of the recent economic depression, it can be said that there has taken place a rise or appreciation in the value of money. A rise in the purchasing power of money leads to a fall in the general level of prices. Thus, appreciation and fall in the price level go side by side.

On the other hand, a fall in the value of money denotes a decrease in its purchasing power, that is, a unit of money in such a case purchases a less amount of commodity than it did formerly. For example, if Rs 5 are required to purchase a fountain pen which could be had for Rs 4 formerly, there is said to be fall or *depreciation* in the value of money. Hence, depreciation and rise in the price level go together. Depreciation must be distinguished from *debasement* and *deterioration*. Debasement is generally practised by weak or insolvent governments; it refers to the difference between the standard and the real value of the precious metal contained in a coin. Deterioration connotes a loss in the legal weight of a coin through wear and tear or through clipping and sweating.

So the value of money rises and falls as the price level becomes lower or higher. Such variations in the price-level, and, therefore, in the purchasing power of money are brought about by shortage or excess of money in relation to demand.

Inflation and Deflation of Currency

Every country at any given time requires a definite quantity of money firstly, to satisfy her needs of trade commerce and industry, and, secondly, to avoid wide fluctuations in prices. When the supply of money is increased to such an extent that it is felt as exceeding

The due requirements of the country, there is said to be an inflation of the currency. Inflation results in depreciation and a rise in the general level of prices. It should be, however, noted that the term inflation is usually applied to that state of over-issue of currency—consisting mostly of inconvertible paper money and debased metallic coins—brought about deliberately by a Government in order to stem the period of financial stringency. During the Great War, there took place an unprecedented inflation of currency as a result of which the value of money fell considerably and the general level of prices rose to unimaginable heights.

Deflation of currency refers to the contraction of currency to such an extent that the aggregate media of exchange fall short in relation to the demand of the country. It is generally resorted to by a Government to increase the purchasing power of money. Deflation of currency took place extensively after the termination of the War. Deflation of currency leads to appreciation, an increase in the purchasing power of money, and a fall in the general level of prices.

Effects of Appreciation and Depreciation

Deflation (or appreciation) and inflation (or depreciation) are the recurring diseases of money, the incidence of which is felt unequally by different classes of people in a country. Some are benefited while others are affected adversely by a change in the general level of prices or by a change in the value of money. 'Changes in the value of money, i.e., fluctuations in prices, are generally harmful because they disturb the even basis of trade and industry, and because they tend to benefit some classes at the expense of others.' Deflation proves injurious in the sphere of production of commodities and inflation in that of distribution.

Depreciation of money or rising prices are advantageous to producers and sellers of commodities. In times of rising prices, business is stimulated and improvements are effected in the methods of production. Entrepreneurs are benefited because the cost of production does not show a corresponding increase with the rise in prices. At least for the time being apparent signs of progress and

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prosperity are visible in the industrial and commercial activities of the country under inflationary conditions. On the other hand, falling prices produce deleterious effects on production because the stock of the manufacturers bring a smaller amount of money. Prices fall rapidly without a corresponding decrease in the cost of production as a result of which they are forced to restrict the scale of production. Labourers are dismissed, unemployment is created and a general gloom sets over the industry.

During periods of rising prices, the purchasing power of money is reduced in consequence of which the interests of consumers are affected adversely. They stand to lose in their satisfaction to the extent of the rises in price. Persons who get more or less fixed incomes, e.g., fixed-salaries servants, pensioners, etc., suffer immensely as the same money income, in times of rising prices, brings less commodities and, therefore, decreasing satisfaction than before. Wage earners are injured in so far as their money wages do not show a proportionate increase with the rising prices and till the time they get adjusted to the new price level they will stand to lose in their satisfaction. Falling prices are beneficial to consumers, wage-earners and persons with fixed incomes.

The interests of debtors and creditors run counter. If prices rise the value of money falls. Debtors as a class gain what creditors lose. Although debtors pay the same amount of money (together with the interest on it) which they borrowed from their creditors at the time of falling prices, yet in terms of commodities they pay a less amount of money as it now purchases a smaller amount of commodities. Thus, in times of rising prices such creditors as money-lenders, investors and debenture-holders lose what their respective borrowers gain. If prices fall the position is reversed and creditors, consumers and wage-earners secure a real gain because of an increase in the purchasing power of money.

Thus, it is seen that fluctuations in the price-level involve serious hardships to the different classes of people by altering the distribution of wealth and affecting the production of goods in a country. Rising prices create

an element of uncertainty, vagueness and speculation ending in a crash of industrial activity. Falling prices are, also detrimental to the economic well-being of the country as they are usually accompanied by trade depression, financial crisis and unemployment. Undoubtedly, instability in the value of money is a characteristic phenomenon of modern times. Though it has baffled so far man's ingenuity to find out a commodity whose value remains absolutely fixed over a comparatively long period, it is highly desirable from the point of promoting economic well-being of the country that variations in the value of money should be kept within minimum limits. Steady prices are beneficial to traders and manufacturers, investors and workmen as a whole, specially over a long period.

Indian Currency

Our rupee which claims descent from the silver 'tanka' introduced by Sultan Altamash in 1233 A.D. underwent several changes before the year 1835 when the present rupee weighing 180 grains (11/12th fine) was formally established as a standard coin by the East India Company. This reform was necessary to avoid a bewildering multiplicity and variety of coins of gold and silver of various denominations, weight and fineness. There were as many as 994 different coins in circulation issued by the various Hindu and Mahomedan rulers to signalise their independence by adopting special coins of their own. This chaotic condition of the currency seriously hampered the trade and commerce of the country and needed the services of appraisers to ascertain the value of the coins used by the people. With the adoption of the rupee as the standard coin for the whole of British India, all other coins of gold and silver ceased to be legal tender but to satisfy the requirements of the people, however, gold coins were accepted at Government treasuries at different rates.

From the year 1870, there was a rapid fall in the prices of silver forcing the various Western countries to close their mints for the free coinage of silver. This depreciated white metal began to flow on a large scale into India and endangered the standard nature of the rupee which went on depreciating in terms of gold. The

gold value of the rupee fell from 2s in 1871 to 1s 2d in 1892 and caused a rapid disorganization in the finances of the Government of India which had to procure an additional amount of rupees to make payment of Home Charges in England. Uncertainties regarding the value of the rupee in terms of gold brought about heavy losses to the Indian Government and reduced the trade of the country to a mere gambling in foreign exchanges. The cry to reform the currency system of the country led the Government to appoint a committee under the presidency of Lord Herschell which recommended the closing of the mints for the free coinage of silver and fixed the rate of exchange at 1s 4d per rupee. At this rate the rupees were to be issued in return for gold received by the Government. The rupee was thus reduced to a token coin and the silver standard was abolished without establishing a gold standard.

The immediate effect of the closing of the Indian mints was a more rapid decline in the prices of the white metal and the famishing of the money market on account of the scarcity of the rupees. To do away with these defects and to establish a sound monetary system in India, the Fowler Committee was appointed in 1898. The Committee declared itself in favour of a gold standard with a open mint and with sovereigns and half-sovereigns circulating as unlimited legal tenders at the rate of Rs 15/- for a sovereign. It discouraged the coinage of fresh rupees and created a fund out of the profits of coinage. The attempts of the Government to introduce gold coins into circulation proved a failure as most of the coins issued by the Government came back to the Government treasuries. This alleged dislike of gold coins by the Indian people drifted the Government policy aimlessly towards a system which is called the Gold Exchange Standard—a standard without gold coins in active circulation. The chief characteristics of this system are — (a) the Government of India takes upon itself the responsibility to sell sterling bills, known as Reverse Council Bills, at a rate of exchange of 1s 4d per rupee minus the cost of transporting gold from India to England, (b) the Secretary of State for India sells Council Bills drawn upon the Indian Government at a rate of 1s 4d per rupee plus

the cost of sending gold from England in India. This sale of the Reverse Council and Council Bills at the lower and upper specie points respectively maintains the gold value of the rupee at fixed parity with very slight changes. No doubt this system brings about stability of the rate of exchange with England and gives a cheaper currency for internal circulation, but it is characterised as an artificial system in which people have little faith and which is liable to break down as was witnessed during the Great War.

The Chamberlain Commission of 1913 recommended that a gold currency is not a necessary condition of the gold standard. It is neither advantageous to India nor the Indian people desire it.

The Indian currency system suffered a considerable disturbance during the Great War when the prices of silver went so high as to make it profitable to melt rupees. The Government was faced with the situation of coining fresh rupees to satisfy the ever-increasing desire of the people for rupees. The mints were pitted against the melting pot and the currency notes were on the verge of inconvertibility. To save the rupee from the melting pot and to maintain the convertibility of the currency notes in circulation, the Government was forced to issue Rs. 2-8-0 and Re. 1 currency notes and other token coins made of nickel.

As soon as the war was over, the Government appointed the Babington-Smith Committee in 1919 to examine the currency system of India. It recommended that, as the rise in the value of silver had come to stay, the rupee be linked to 2s gold to bring about stability in the rate of exchange. It also favoured the Gold Exchange Standard System and advocated the use of more currency notes in circulation. The prices of silver did not behave as was expected while the balances of trade were becoming against India due to heavy imports. These factors brought about a great divergence between the market rate and the Government rate of the rupees in terms of gold and all the heroic efforts of the Government to maintain the recommended ratio of 2s. gold failed miserably. In short the period was marked by 'financial and commercial confusion.'

As the entire country was crying for reforming the currency system, the Government appointed the Hilton-Young Commission in 1925. It recommended the adoption of the Gold Bullion Standard—a standard without a gold currency in circulation but with a promise to make gold, in the form of bars available for all purposes at the rate of Rs 21 3 10 (1s 6d per rupee) per tola—and advocated the establishment of a Reserve Bank in India with the powers of issuing currency notes and controlling other currency matters. The rupees and currency notes were to remain unlimited legal tenders as before. It kept the door open to establish a full fledged Gold Standard as soon as the Government finds itself in a position to do so.

The Reserve Bank of India has started its work and all eyes are fixed towards it for introducing the necessary currency reforms in India.

The condition of the present war has induced the Government of India to introduce a paper rupee and a nickel rupee containing a very little quantity of silver, while the rupees which were issued before the reign of King George V have been withdrawn from circulation.

The Indian Paper Currency System

Before 1861, The Presidency Banks of Bengal, Bombay and Madras had the privilege of issuing their own notes payable to bearer on demand. These notes, however, had only a very limited circulation. The Act of 1861 established the Government monopoly of issuing notes of the denominations of Rs 5, 10, 20, 50, 100, 500, 1,000, and 10,000 and divided India into seven circles of issue, namely Calcutta, Bombay, Madras, Cawnpore, Lahore, Karachi and Rangoon. These notes were legal tender only in their respective circles of issue and were convertible into rupees at the currency offices. In order to popularise them, notes of all denominations up to Rs 100 have been made universal (legal tender) throughout India. Facilities for converting notes into rupees at the various Government treasuries and the branches of the Imperial Bank of India were also extended to the holders of notes.

The convertibility of our notes is maintained by a paper currency reserve consisting of rupee and sterling securities and a large amount of gold and silver bullion and coins.

The security portion of the reserve did not exceed Rs. 14 crores up to the year 1913, when the exigencies of the War led to a rapid rise in the total notes in circulation and forced the State to increase the invested portion of the reserve to Rs. 120 crores. In 1920, on the recommendation of the Babington-Smith Committee, the Government adopted a minimum of 50 per cent. metallic reserve against notes in circulation and provided for an issue of 'emergency currency' up to Rs. 12 crores on the security of the inland trade bills (hundies).

As recommended by the Hilton-Young Commission, the issue and management of the paper currency were handed over to the Reserve Bank of India in 1935. To increase the elasticity of note circulation, the Reserve Bank of India will adopt a proportional reserve system. Our total note circulation in India exceeds Rs. 170 crores today and statistics prove clearly that note circulation is extending much more rapidly than was expected.

CHAPTER XX

CREDIT, BANKING AND TRADE

The Meaning of Credit

An exchange transaction can be carried either in cash wherein the purchaser makes an immediate payment to the seller for the goods purchased, or on credit in which case the purchaser acquires goods not by making an immediate payment but on the promise to pay an equivalent value or a little more than that at some future time. Since in a credit transaction the transfer of goods takes place for a promise of deferred payment, it is obvious that the creditor or seller must have confidence in the honesty of the debtor or buyer, otherwise he would not think of lending money nor transferring his goods. Confidence, therefore, forms an essential and foremost part of credit. In everyday language, the word 'credit' means simply 'belief' or 'confidence,' but in Economics, as S. Evelyn Thomas points out, the term credit is now applied to that belief in a man's probity and solvency which will permit of his being entrusted with something of value belonging to another, whether that something consist of money, goods, services or even credit itself, as when one man entrusts to another the use of his good name and reputation. But confidence is not the only element required in a credit transaction. The time element is equally important in credit inasmuch as the transfer of present money or something of value takes place for a promise to repay it after some time. Besides confidence and time, amount is the third element of credit. As credit is a 'right or privilege' extended by the creditor to his customer allowing him to make payment at some future date for the goods parted with today, it is apparent that this credit will be granted according to the degree of confidence enjoyed by a customer at the

hands of his respective creditors. A creditor may hesitate to give credit for large sums while he may not feel any objection in allowing credit for a small amount of money or money's worth to a particular customer. Thus, confidence, time and amount may be regarded as the three main elements of credit. The written evidences in which promises are drawn up to pay money, after a specified period of time, are known as *Credit Instruments*, which serve as important media of exchange in modern times.

Importance and Advantages of the Credit System

Credit plays a very prominent part in the organization of production, industry and commerce in the modern industrial economy; its importance cannot be over-emphasized and necessity can scarcely be overlooked. Credit is organized through credit instruments such as cheques, bills of exchange, *hundies*, bank notes, bank draft, etc., and the dominant position in the organization of the credit system is occupied by a 'bank' or a 'banker.' As a matter of fact, the functions and organization of banking are closely allied to the functions and organization of credit. Credit is the bedrock upon which is raised the structure of a bank. As credit acquires an increasing force in the commercial and industrial activities of a society, banking arrangements get highly developed and efficient. As a general rule, it may be stated that most of the transactions in wholesale and retail trade are today partially or wholly carried on credit basis as a result of which businessmen are enabled to conduct their productive activities much more conveniently and economically. Credit has been styled as the life blood of commerce and as the "heart and core of the modern business structure."

The chief functions and the advantages of credit may briefly be summarized below :—

1. Credit economises the use of metallic money and thus, substitutes a cheap medium of exchange for a more expensive one, which, in view of the enormous expansion of trade and industry, would be insufficient to meet the modern requirements. Through credit instruments the transfer of money from one place to another can be effected much more conveniently and economically. A

dangers. It must be remembered that the entire superstructure of credit is ultimately based on the strength of the resources of metallic money and on public confidence. If once confidence is shaken, the credit mechanism collapses, bringing in its train gloomy results on trade, industry and commerce. Some of the possible disadvantages involved in the credit system may be pointed out as follows:—

1. The greatest danger of credit lies in the over-issue of credit than what is actually required by the business needs of the country. The temptation to expand credit unduly, in times of flourishing trade, is very great and because this feeling can hardly be resisted speculation, over-investment, over-production, financial crises are the ultimate consequences that follow such an unwise credit policy.

2. Facile credit specially for consumption purposes may lead to extravagance and indebtedness which may endanger the smooth progress of society in a variety of ways. In India, cheap and easy credit available to peasants for personal consumption is regarded as one of the causes responsible for their indebtedness.

3. Again entrepreneurs of inferior ability having credit may squander money on visionary and unproductive enterprises and yet they may be enabled to remain in business simply by means of credit. Their eventual collapse will not only bring ruination to themselves but to all those whose capital was invested by them for use. Thus, the modern credit system is responsible for the 'concealment of financial weaknesses' of a business.

4. The credit system is also responsible for the formation of monopolistic combinations of producers at the expense of individual private enterprise. Some writers think that although 'the results are not necessarily harmful, they may not be so beneficial as when the capital is in the hands of a number of individual producers.' Such monopolistic organizations are often a source of exploitation of labour and of unfair competition.

In view of these dangers involved in an indiscriminate organization of credit, it is very necessary that credit

mechanism should run on well-regulated and judicious lines

Is Credit Capital ?

At one time it was maintained by some economists that credit is capital and can create wealth quite as well as land and labour. But credit cannot be regarded as a separate factor of production. Prof Gide remarks : "Credit is a particular *method* of production—just like exchange and division of labour. It consists of transfer of wealth or capital from one person to another. Credit can no more create wealth than exchange can create commodities." Credit facilitates production by enabling the transference of wealth from the savers to the users and from the less capable to the more capable. Credit, therefore, is not capital itself, it is a device by which exchange transactions can be effected much more conveniently, and economically. From the individual point of view, credit may be regarded as capital inasmuch as the borrowed money can help a trader or manufacturer to increase his business. But from the social point of view, credit is not capital in so far as the amount lent to a borrower is not doubled but is merely passed on to the hands of the borrower from the possession of the creditor.

Nevertheless, it must be pointed out that credit creates new capital to the extent to which it replaces metallic money from circulation and it also increases the amount of effective capital available for production inasmuch as small savings of the people, which could not have been employed for productive purposes or otherwise spent in personal gratification, are now pooled up for production. Banks which organize credit attract savings of all those who for some reason or other cannot make a better use of them. In the absence of credit facilities many of the producers of the good organizing ability would have found it almost impossible to build up their businesses on such a colossal scale. Thus, credit indirectly promotes the accumulations of capital and stimulates production.

The Mechanism of Credit

In order to take the maximum advantage of credit mechanism for the development of trade, commerce and

industry, a very complicated machinery has gradually come to be set up at the present day for the control and organization of credit and credit operations. The machinery by which credit operations are organized consists of two parts :—

1. *Credit Instruments*, the evidences of indebtedness such as cheques, drafts, bills of exchange, promissory notes, etc.

2. *Credit Institutions*, consisting of Banks with their Clearing Houses.

Credit Instruments

A credit instrument may be defined as a written document issued by a Government or a corporation or an individual containing a promise to pay money at a future date. Like money, credit instruments also facilitate exchange transactions but their circulation is restricted because their acceptability is conditioned by the confidence reposed by the receivers in the honesty and financial standing of the drawers. The stronger and wider-known the credit of the issuing party, the greater will be the circulation or negotiation of its credit instruments. The important credit instruments are promissory notes, cheques, drafts, bills of exchange and *hundies* which are treated below in details.

Promissory Notes

The Indian Negotiable Instruments Act defines a promissory note as an instrument in writing containing an unconditional undertaking, signed by the maker, to pay a certain sum of money only to, or to the order of, a certain person, or to the bearer of the instrument. (Notes are usually issued by individuals and corporations and they must be distinguished from Bank Notes or Government Notes.) If a buyer is known fully to the seller regarding his business morality, then the buyer by executing a promise to pay either on demand or after a specified period of time can have the desired goods from the seller. A promissory note is usually drawn in the manner as shown already.

The expression 'for value received' signifies that the writer has drawn the promissory note in exchange of pay-

ment for a real transaction and that no forgery has been displayed upon him. A promissory note has only two parties—the maker or the drawer of the note and the payee who is the creditor of the drawer. In order to make it legally valid, and ad valorem stamp is affixed to it

Cheques

In advanced countries, where banking habits are developed to an appreciable degree, people, for reasons of

Form of a Promissory Note

Rs. 200

CANPORE

June 26, 1942

Three months after date, I promise to pay to Messrs. Sri Ram Raj Kumar, or order, the sum of Rupees Two hundred only for value received.

(Sd.) RAM KRISHNA



To

Messrs. Sri Ram Raj Kumar
Cloth Merchants
Jaipur

Or

Rs. 200

BOMBAY

The 7th June, 1942

I promise to pay on demand to Mr. Ram Lal, or order, the sum of Rs. Two hundred with interest at 9 per cent per annum for value received.

(Sd.) M. Y. KHAN



To

Mr. Ram Lal
67 Civil Lines
Lucknow

convenience and efficiency, prefer to keep their accounts in banks and draw money for their various requirements through cheques. A cheque is a written *order* on a specified bank made by the depositor to pay an amount of money specified therein to the order of a person named or to the bearer of the cheque. A cheque is always payable on demand and the bank cannot refuse to encash it provided the depositor maintains sufficient money in bank to meet a cheque. For the sake of convenience, uniformity and security against any fraud each bank issues its own cheque book for the use of its depositors. The person who draws or writes a cheque, i.e., the customer of the bank is called the *drawer*; the bank on which the cheque is drawn and which makes the payment is called the *drawee*, and the person in whose favour the cheque is drawn is known as the *payee*. Sometimes the drawer makes the cheque payable to *self* when he requires to withdraw money from the bank for his own personal needs.

In order to have a clear idea of a cheque, the reader is referred to examine the following specimen of a cheque carefully.

The specimen of a cheque shows that it contains two unequal parts divided by a perforation. The right-hand oblong portion is the cheque proper filled in by the depositor with his signature at the right-hand bottom corner; the left-hand part is called the counterfoil and is retained by the drawer in his cheque book as a memorandum. Jai Pal Singh is the drawer of the cheque and the the Bazar Branch, Bareilly of Bareilly Corporation (Bank) Ltd., is the drawee, and Raj Pal Singh is the payee in whose favour the cheque has been drawn. It is a bearer cheque and money can be had on its presentation to the bank.

From the point of transferability, a cheque may be an Order Cheque or a Bearer Cheque.

A 'bearer cheque' is payable to the holder or possessor or, bearer of it, that is, the bearer can receive payment the moment it is presented for encashment on the counter of the bank. A bearer cheque does not require any endorsement and the bank is not blamed for its negligence or

Form of a Cheque

No. 57529

No. 57529

20th December 1941

Bareilly Corporation (Bank) Ltd.

Bazar Branch, Bareilly

20th Dec. 1941

बरेली कारपोरेशन (बैंक) लिमिटेड

بازار بریلی (بنک) لمیٹید

In favour of.....

Mr. Raj Pal Singh

~~Pay Mr. Raj Pal Singh~~

or Bearer/order

~~Rupees Two Hundred and annas eight only.~~

Rs. 200/8/-

Rs. 200/8/-




Raj Pal Singh & Sons

BAREILLY CORPORATION (BANK) LTD

inaccuracy if the payment is made to a wrong person, as the bank is not required to take any proof to find out whether or not the payee is the rightful claimant.

A bearer cheque becomes an 'order cheque' if the word 'order' is inserted by the drawer after having struck out the word bearer. An order cheque is safer than a bearer cheque, as the bank will not encash it unless the payee gives a proof of his own self. The bank must satisfy itself that the person to whom a payment is to be made is the rightful claimant. Again, an order cheque cannot be transferred to any one else unless it is endorsed by the payee. By endorsing it, that is, by signing his name on the back of the cheque the payee can order or authorize any other person to receive the money. Thus, the negotiability or the transferability of an order cheque depends upon endorsement.

A crossed cheque is a cheque on the face of which two vertical parallel lines are drawn with expressions like "A/C" or "& co." between them. The effect of this crossing is that the payee cannot get cash on presentation. The amount of the cheque will be credited to the account of the payee and if the payee wants to draw the money he will be required to write another cheque upon the same bank. Such cheques are very safe and ensure payment to the desired person only. The payment through a cheque is very convenient and safe and practically no time elapses between the offer of a cheque and its final encashment. In spite of their convenience, cheques cannot be called money as they are not legal tender and as their circulation or negotiation is restricted to a narrow area in which the solvency of the parties is known to one another thoroughly.

Bank Drafts ✓

A bank draft is a cheque drawn by a bank upon another bank or its own branch at a different place, requesting it to pay the sum of money mentioned therein to the order of the person named, or to the bearer on demand. A bank draft is usually payable on demand. In this case the bank that makes the draft is the drawer, the bank on which it is drawn is the drawee and the person to whom it is payable is the payee.

Form of a Bank Draft

No. 14719

BAREILLY BRANCH

Bareilly Corporation (Bank) Ltd.

Exchange for Rs. 1000-0-0

24th May 1942

On demand pay this Sola of Exchange to the order of Seth Shanti Prasad
 Hazari Lal the sum of Rupees one thousand only.

To

The Manager

Shabjahanpur Branch

For Bareilly Corporation (Bank) Ltd.

Tika Ram

Bareilly Corporation (Bank) Ltd.

Manager

Under Rupees one thousand and one only

Traders and merchants are often required to remit money to their creditors living in distant cities and countries. One of the cheapest methods available to them for discharging their obligations is to get a bank draft drawn in favour of his creditor on depositing the cash in the bank. The bank issuing such a draft charges some commission for doing this service. Foreign payments are usually made through bank drafts which require no acceptance—being payable on demand.

Bill of Exchange

A bill of exchange is an instrument in writing, containing an unconditional order, signed by the maker, directing a certain person to pay a certain sum of money only to or to the order of a certain person or to the bearer of the instrument.

A bill of exchange is used exclusively for commercial purposes. There are three parties to a bill of exchange—the drawer, the drawee and the payee. The drawer is the person who writes out or drafts the bill, i. e., the creditor or the seller of the goods. The drawee is the person who is directed to make payment according to the conditions specified in the instrument. The payee is the person to whom the money is to be paid and he is usually the creditor of the drawer. A bill of exchange is drawn by the creditor requiring his debtor to pay the sum specified in the bill either to self or somebody else. After a bill has been drawn by the seller of the goods, it is presented to the buyer or the drawee for his acceptance. The drawee accepts the bill by writing the word 'accepted' and putting his signature on the face of the bill and he becomes liable to pay the amount specified at the due date.

From the point of view of payment, a bill of exchange may be of two kinds. It may be payable on demand in which case it is called a sight bill or Darshani Hundi. A bill of exchange in which the drawee is required to pay the specified sum after a stipulated period of time—say after thirty or ninety days of the acceptance of the bill—it is known as time or usance bill or Muddati Hundi. In the case of time bills three extra days known as days of grace are allowed in addition to the time mentioned in

Form of an Inland Bill of Exchange

410

A FIRST APPROACH TO ECONOMICS

Rs 100/8/-

DELHI

STAMP

The 1st July, 1942

Ninety days after sight of this bill please pay to
Messrs. Rana Bihari Lal & Sons the sum of rupees one hundred and
annas eight only for ~~the order of~~

~~Accepted at the request of the drawer
Cawnpore Branch & Co. Ltd for Kapoor & Sons~~

To

MESSRS. KAPOOR & SONS

For THE NATIONAL STORES LTD.

CANPORE

SHAM BEHARI LAL

Proprietor

the instrument. A sight bill is just like a cheque. But more generally bills of exchange are time bills, and as Hartley Withers has stated, 'the element of time is the real outstanding quality in the bill of exchange which separates it from the cheque.'

Bills of exchange may be 'inland bills' or 'foreign bills;' the former are used in discharging internal obligations, the latter are meant for meeting foreign obligations, i.e., they are drawn in one country and are payable in another country. Just as internal bills facilitate exchange transactions obviating the necessity of metallic money to a considerable degree, similarly foreign bills facilitate external trade and serve to settle foreign obligations without the flow of specie or bullion to foreign countries.

The bill of exchange discharges two obligations at the same time. The drawer of this bill, i.e., R. Sarau is the creditor of Messrs. Kapoor & Sons, but to the same extent he is a debtor to Messrs. Rama Brothers. He, therefore, draws a bill on Kapoor & Sons, sends it to Rama Brothers who will present it to Kapoor & Sons for acceptance. On getting the acceptance of the drawee, it becomes a negotiable instrument which can be used for discharging any further obligation or can be discounted, i.e., encashed at the counter of the bank after deducting the interest for 93 days at the market rate prevailing at that time.

Hundies

Hundies are indigenous credit instruments, which are often called Indian bills of exchange. They are internal bills of exchange and have been used by Indian merchants for making remittances in the course of exchange transactions from very remote times. Their circulation depends on local usages and customs prevailing in the mercantile community and in some respects the provisions of the Indian Negotiable Instruments Act also apply to them. They are issued by creditors or sellers of goods and discounted by big shroffs or bankers. The banks also discount hundies if they have been endorsed by a shroff known to the bank as regards his financial standing. Hundies are generally written in *Mundia* in Northern India; their language is full of formalities and their

prevents the possibility of any fraud in the transaction. Miti hundies (or usance bills) are also written practically in the same style with the difference that it is payable after some period of time specified in the bill.

Banks and their Functions

The term 'bank' has been defined in various ways by different writers. This multiplicity of definitions arises mainly due to the diverse and intricate functions discharged by a bank in modern times. For our purpose it would be sufficient to say that a bank is an agency which borrows money from those who are in a position to give and lends the same at a higher rate of interest to those who require it and can utilize it with advantage. The business of 'borrowing and lending' may be carried on either by an individual or a corporation and these are properly spoken as 'banker' or 'bankers.' But as the two primary functions are based upon credit, therefore, a bank is more appropriately called an institution dealing in money and credit. The importance of efficient and regulated banking organization in the economic construction of a country is enormous.

The importance of banking organization can better be understood by dealing briefly with the services and functions performed by a bank.

1. The essential function of a bank is to borrow money in the shape of deposits from its customers on the promise that it will be paid back to the depositor on his making a demand through a written order, for repayment. By ensuring a safe custody of the money deposited with them and by guaranteeing to pay interest on it, banks accumulate into one great reservoir the small and big savings of individuals and corporations which are not in a position, for some reason or other, to utilize them to the best advantage. A bank receives deposits on 'current account,' 'deposit account' and 'savings bank deposits.' On deposits in the current account the depositor is allowed to withdraw money by cheques without giving any notice to the bank. Generally no or very little interest is paid on such deposits. On deposit accounts the bank pays a fixed rate of interest according to the length of the period the money is deposited with the bank. As a rule, the

greatly facilitated commerce and production of goods. In the modern business world, sales and purchases are done on a credit basis and the sellers of goods usually draw bills of exchange on their debtors or accept latter's promissory notes in the belief that payment would be made at the future stipulated date. Such credit instruments as promissory notes, bills of exchange, hundies and other commercial papers have always to wait for a certain period of time before they can be encashed into metallic money. But a convenient source of realizing ready money is provided by banks. The holder can present such credit instruments to his bank which will discount them at their 'present value,' that is, purchase them in cash by deducting interest at the current market rate for the time an instrument has to run. The bank in its turn waits for its maturity and realizes the amount from the drawee mentioned in the instrument. This is a good source of investment and profits to banks.

5. Banks economise the use of metallic money by creating such media of exchange as cheques, bank drafts, etc., and provide cheap and convenient facilities for the remittance of money from one place to another. Remittances of money to distant places are made by sending bank drafts which are drawn by one bank upon its agencies or other banks. And by the institution of the Clearing House System, the mutual obligations of banks are cancelled and thus, a great economy of time and money is effected.

6. Banks also finance the import and export trade of a country by discounting and rediscounting the foreign bills of exchange. They also issue 'letters of credit' as a result of which the inconvenience of carrying money is avoided. Banks also facilitate the investment of capital in industries and thus expedite the industrial and commercial expansion of poor and undeveloped countries.

7. Banks grant loans to traders and manufacturers to help them to tide over the period of financial stringency, as every businessman faces at least the want of cash during some periods, thereby stimulating the efficiency and continuity of production. But bank loans are seldom made in cash. They are usually made by means of 'book

credit a system under which the bank credits in the name of the borrower the amount asked for and the borrower is allowed to draw money by cheques at his convenience. Such credit deposits are called loanable capital. The creation of credit by a bank depends upon its cash reserves available at that time.

8 A well regulated system of banking organization by inspiring confidence in public, promotes the saving habits of the people, helps the creation of effective capital for purposes of production. In the absence of banks people would have spent their small savings in the gratification of their immediate wants or hoarded them underground unproductively.

9 Banks undertake the safe custody of valuables and securities on nominal charges.

10 In addition to these important functions, banks perform a large number of agency services on behalf of their customers, such as the collection and payment of cheques, bills, and dividends and making of periodical payments to Life or Fire Insurance Companies on behalf of their customers.

11 Lastly, banks by virtue of their dealings inculcate business morality in people, and promote the virtues of honesty, promptitude and good faith among their clients. The educative advantages thus accruing from banks are of no mean importance.

Various Classes of Banks in the Indian Money Market

In view of the varied economic activities, every progressive country has found it much more suitable and convenient to institute different kinds of banks, each specialising in some particular channels of banking. But if one particular kind of bank undertakes to handle a particular type of business, it does not preclude it from taking other functions which are mostly performed by other classes of banks. As such, no demarcating line can be drawn as to the functions of any particular type of bank.

By a *money market* is meant all those institutions and parties which deal in the 'borrowing and lending' of money. It refers to the entire region where borrowers

and lenders of money are found connected with the *use of money*. Broadly speaking, various kinds of banks, discount houses, private bankers, bill-brokers are regarded as the constituents of a money-market. The essential function of a money-market is to supply to the manufacturers and traders with the requisite amount of capital and credit for purposes of production and exchange dealings. Another important function of the money-market is to supply currency according to business needs of the country and to maintain the relative stability of the purchasing power of the monetary standard.

The money-market in India consists of the following constituents :—

(a) The indigenous bankers and money-lenders known by different names in different parts of the country—Shroffs, Marwaris, Sahukars, Mahajans, Boharas, Chetties, Seths, etc.

(b) Modern banking institutions modelled on European lines.

1. The Reserve Bank of India. ✓
2. The Imperial Bank of India. ✓
3. Joint-Stock Banks. ✓
4. Exchange Banks. ✓
5. Co-operative Banks.
6. Savings Banks.
7. Industrial Banks. ✓
8. Land Mortgage Banks.

Indigenous Bankers

Indigenous banking has been carried on from times immemorial and researchers have unearthed plenty of material to show that many of the banking practices of our age were followed by indigenous bankers, long before they were known to any country of the world. The indigenous bankers and money-lenders performing a large variety of functions in respect of agriculture, trade and general banking are found scattered all over the length and breadth of the country. The indigenous banker is called by various names—the Mahajan, the Bania, the Sahukar, the Shroff, the Seth, the Bohara. Different castes also conduct money-lending and banking in different pro-

of loans is small, on the personal security of the borrower at a fixed rate of interest, or on the condition that the producer would sell his finished commodity to the money-lender at the predetermined prices. Such money-lenders undertake both money-lending and trading. Scientifically speaking, money-lenders cannot be called bankers, for except lending of money, they do not undertake any of the other functions of a banker. He maintains a small amount of capital and lends it to the borrowers at the highest rates he can possibly exact from them. He advances loans for any and every purpose and is not particular whether they will be spent productively or extravagantly. He does not receive deposits of any kind and as such he can hardly inculcate the habit of thrift and economy around him. In short, he is a money-lender but not a banker.

The indigenous bankers, undertake a good deal of general banking business which is done by modern banks and play an effective part in financing internal trade and industry of the country. They carry on the functions of money-lending, receiving deposits on current and fixed accounts, allowing cash credits and issuing and discounting hundies of both kinds—demand and usance. But there are differences in detail between the functions of an indigenous banker and those of a joint stock bank. Indian banking is carried on by private individuals or families and not on the joint stock basis. The indigenous banker raises a very little amount of capital from deposits and withdrawals against deposits are in cash and not by cheques. Another important difference is found in the fact that the indigenous bankers carry on a variety of functions apart from the banking business. They combine banking, with trade and commerce acting as grain-dealers, commission agents, brokers, traders and industrialists. This combination of functions has been regarded as one of the main causes of the decline of banking business of the indigenous bankers. There are also some other important causes which have contributed to the weakening of their banking business. Nevertheless it has been truly remarked that 'even at the present time the shroff continues to play an important part in the finan-

cial system of the country as an indispensable link between the Indian money market and the vast trading community' He finances the agriculturist through local *sahukars* and money-lenders, the petty artisan and the small trader assists in the movement of crops to consuming areas or to the ports, and distributes all kinds of goods in the country

In respect of providing finances to agriculture, cottage industries and internal trade of the country, the part played by money-lenders and indigenous bankers is of enormous usefulness which can hardly be dispensed with at the present time when the absence of organized banks is keenly felt in India. The Central Banking Inquiry Committee, after investigating the weak features of the indigenous banking have put forward many useful suggestions, the adoption of which must go a long way in improving the position of the indigenous banker and making him a useful member of the Indian banking system

Imperial Bank of India

The Imperial Bank of India was formed in January 1921 by the amalgamation of the three Presidency Banks, namely the Bank of Bengal, the Bank of Bombay and the Bank of Madras which were founded in 1806, 1840 and 1843 respectively. The need for such a bank which would bring uniformity and stability into the Indian money-market was felt long ago before its inception. The Imperial Bank of India is governed by a special Act known as the Imperial Bank of India Act, which defines the restrictions imposed and privileges conferred on the Imperial Bank and determines the fiscal relations it will have with the Government of India. The control of the Bank is entrusted to a Central Board of Governors with three local boards at Calcutta, Bombay and Madras which look after the working of the business of the bank in their respective jurisdictions

It is a commercial bank with private shareholders and competes to some extent with other banks. It inherited from its three predecessors certain functions as a bankers' bank, which, together with its increased responsibilities as the Government bankers, accounts for some of the existing restrictions imposed on its activities by its present

charter. The important restrictions are :—

(i) The Bank cannot make any loan or advance—

(a) for a longer period than six months,

(b) upon the security of its own stocks and shares,

(c) on the original security of immovable security.

(ii) The amount which may be advanced to any individual or partnership firm by way of discount on any personal security is limited.

(iii) The Bank cannot discount or advance on the security of any negotiable instrument of any individual or partnership firm payable at the town or place where it is presented for discount, which does not carry on it the separate responsibilities of at least two persons or firms unconnected with each other in general partnership.

(iv) The Bank is prohibited from transacting any business not specified in the Act, foreign exchange business being one of the excluded items.

The main functions of the Imperial Bank may be summarized as follows :—

1. It acts as a bankers' bank inasmuch as most of the banks in India keep their balances with it. It manages the Clearing Houses and supplies the necessary supervising staff. The business of the settlement of cross claims is carried on in the precincts of the Imperial Bank.

2. It advances money on the security of stocks, Government securities, debentures, goods or documents of title, accepted bills of exchange or pro-notes, etc.

3. It draws, accepts, discounts and sells bills of exchange and other negotiable securities payable in India or Ceylon. It also deals in foreign bills of exchange with the sanction of the Governor-General in Council.

4. It receives deposits, securities for safe custody and undertakes other banking functions.

5. 'With a view to increasing banking facilities and fostering among the Indian people the habit of banking and investment, the Imperial Bank of India was placed by Government under a statutory obligation to open 100 new branches within the first five years of its inaugura-

tion This obligation was duly fulfilled and 120 new branches were opened at places where there was already a branch of one or other of the Indian joint stock banks'

The Bank acts as a fiscal agent to the Government of India in so far as it receives all moneys from the general public on behalf of the Government and keeps Government balances at the head quarters and its branches The bank has had no rights to issue notes as a result of which there remained a dual control over the credit and currency policy of India, the latter being controlled by the Government of India

Exchange Banks

With the growth and development of import and export trade of India exchange banks came to be established to facilitate foreign exchange transactions But as the foreign trade, in the initial stages, was mostly confined between India and England, the early exchange banks established in India were the branches of English banks having their head offices in London But later on, as the leading industrial countries of the world began to partake of our foreign trade on an increasing scale, many branch agencies of exchange banks situated in London or on the Continent or in the Far East and the United States have come to be established in India. Some of them carry on their considerable portion of business in India e.g., the National Bank of India, the Peninsular and Oriental Banking Corporation and the Chartered Bank of India while others are doing only a small portion of their total business in India

The principal function of exchange banks is to finance the foreign trade of India The exchange banks purchase and discount bills of exchange drawn by Indian exporters and they also collect on maturity the proceeds of bills drawn on Indian importers for goods purchased by them They deal in drafts, telegraphic transfers payable in London and elsewhere outside the country As the Imperial Bank of India has been prohibited by law to finance foreign trade except for its customers on a limited scale and as the Indian joint stock banks have neither the requisite resources nor the specialized training and

knowledge to carry on that business, exchange banks are the sole monopolists as regards the financing of the external trade of India. In the branch of deposit banking they are a serious rival to our Indian joint-stock banks. They have lately begun to take an important part in financing the internal trade at those places where their branches are located. In spite of such an immense amount of Indian trade being carried on by foreign exchange banks, it is an unfortunate instance in the career of Indian banking to have not a single bank doing purely foreign exchange business.

Indian Joint-Stock Banks

It was in the earlier decades of the nineteenth century that the European merchants took the initiative of starting joint-stock banks in India for financing the internal trade of the country. The purely Indian joint-stock banks called the Oudh Commercial Bank was started in 1881. Since then the number of Indian joint-stock banks has steadily increased in spite of serious reverses encountered many a time by the Indian banking system. During the year 1906, in the wake of the Swadeshi Movement, many Indian joint-stock banks came into existence specially in Western India, the United Provinces and the Punjab. But the mushroom growth of banks without any specialized knowledge on the part of the directors and managers led to a serious banking crisis in 1913-14, when about fifty-five banks went into liquidation, during the course of a single year, and spread panic in the public. Confidence thus being shaken, the foundations of many important and big banks shivered and tumbled down as a result of the onrush of the creditors. This banking crisis brought to light some of the very weak points of the Indian banking system and since then, efforts have been made to remove them.

The joint-stock or commercial banks in India play an important part in mobilizing the savings of the country for their productive employment in the furtherance of trade, commerce and industry. They attract deposits from the people by paying different rates of interest on them. The commercial banks finance the internal trade of the country by discounting bills of exchange and

collecting money from the drawee on their maturity 'They also take part in the movement of produce from the village to the exporting ports and in the distribution of imports from the ports of entry to the distributing centres. The business of these banks so far as the agriculturists are concerned is usually confined to the larger landholders, the planting community and others who possess tangible and marketable security.' They do not engage themselves in the financing of industries nor do they take part in the financing of foreign trade. Almost in every town of commercial and industrial importance there is found a bank or a branch bank doing a considerable business of banking. But still there are several urban areas which are not served by modern banking facilities.

Co operative Banks

The co operative banks were established in 1904 in order to provide a suitable financial agency that could relieve and save the poor cultivators and artisans from the financial embarrassments and the high rates of interest of the local money lender. Co operative banks afford banking facilities to the poor requiring credit for productive employment. The primary credit societies which are found working mostly in rural areas of the country are at the bottom of the financial structure. The primary societies are financed by central banks (operating in a district or a smaller area) which can secure a larger amount of funds than a primary society by attracting a better class of investors in the towns. These central banks not only provide funds to primary societies but they also act as balancing centres inasmuch as they take over the idle balances for investment from those societies which can spare from their surplus funds. The chief function of the central banks is to provide finance to their affiliated primary societies. They receive deposits from the public and increase their funds by securing loans from the Provincial Bank to which all the central banks in a province are affiliated. It forms the highest stage in the co operative financial structure. Besides the primary agricultural credit societies, there are also non agricultural credit societies both with limited

and unlimited liability which provide credit facilities to small traders, artisans, industrialists, labourers and clerks. The co-operative banks besides organizing credit play an important part in encouraging the habits of thrift, economy, honesty and sociability.

Savings Banks

Savings banks are chiefly meant to inculcate the habit of thrift and investment amongst the poor classes. Now-a-days it is the usual practice with the joint-stock banks to open a separate account, called 'savings section' for doing this business. There are many co-operative thrift societies, particularly in the Punjab, which encourage savings among those for whom they are meant. But by far the most important agency which has stimulated thrift and savings among the smaller investors is found in the Post-Office Savings Banks wherein such a low sum as Rupee one can be deposited. As they are directly governed by the Government through the Postal Department, they naturally provide a very safe and secure means of investment. It is suggested that with an extension of Post-Office Savings Banks in those areas where they are not available at present much of the slender savings of agriculturists, artisans, wage-earners, small merchants, traders and industrialists can be mobilized for the great profit of the country. There are no Industrial and Land Mortgage Banks worth the name in our country. These banks need a large amount of money for long term investments. Our industries need an early establishment of such banks to finance them. It will be a boon to the agricultural classes of India if land mortgage banks are opened on extensive scale.

Reserve Bank of India

The importance of a Central or Reserve Bank in the sound economic life of a country cannot be over-exaggerated. There exists a very close relation between the maintenance of financial stability and a central banking organization. It was after 1920 that the public opinion also got awakened to the necessity of having a central bank for the due performance of such important functions as note-issue, management of cash balances and regulation of foreign exchanges, etc. The Imperial Bank of India

was set up in 1921 with the idea that it would rise to the full stature of a central bank, but it proved only a half-way measure. In 1925 when the Royal Commission on Indian Currency and Finance presided over by Hilton-Young was surveying the currency situation of India, the control of currency and credit was in the hands of two distinct authorities—the Government and the Imperial Bank of India whose policies could at times be widely divergent. The Commission were of opinion that this state of affairs should cease to exist, and if monetary stability was to be achieved, there was the necessity of a unity of policy in the control of currency and credit. The Hilton Young Commission, therefore, definitely recommended the establishment of a Reserve Bank in India.

But owing to some sharp differences of opinion between the Government of India and the Legislative Assembly on the question of the management of the Bank, the Reserve Bank Bill introduced in January 1927 could not get through the Assembly with the result that the Bill was eventually withdrawn and was again introduced in the Legislative Assembly in 1933. In March 1935 applications for shares of the Reserve Bank of India were invited and by the middle of 1935 the Reserve Bank of India began its regular work of controlling and organizing the money market of India.

The Reserve Bank of India is a share holders' bank with Rs 5 crores as its original share capital, divided into 500,000 shares of Rs 100 each, which are fully paid up. There are five registers of shares, namely Delhi, Calcutta, Bombay, Madras and Rangoon. The management of the Bank is entrusted to a Central Board consisting of 15 Directors—a Governor, two Deputy Governors, four Directors and one Government official to be nominated by the Governor-General in Council, and eight Directors to be elected on behalf of share holders on the various registers. The cumulative dividend on shares has been fixed at $3\frac{1}{2}$ per cent per annum by the Governor General in Council.

The Reserve Bank of India is authorized to carry on the following commercial business, viz, (i) to accept money on deposit without interest (ii) to purchase, sell

and rediscount bills of exchange and promissory notes with certain restrictions ; (iii) to make loans and advances for not more than 90 days on the security of stock, funds, gold or silver, bills of exchange and promissory notes ; (iv) to make advances to Local Governments for a period of not more than three months from the date of the making of the advance ; (v) to issue demand drafts made payable at its own offices or agencies ; and (vi) to borrow money for not more than one month for the business of the bank

The central banking functions of the Reserve Bank are to accept money on account of the Secretary of State in Council, Governor-General in Council and Local Governments and to carry out their exchange, remittance and other banking operations including the management of public debt and the issue of loans on conditions that may be agreed upon. The Bank has the sole right to issue notes and this right is now exercised by the Issue Department which has taken over from the Governor-General in Council the liability of all the currency notes of the Indian Government. The Issue Department is kept separate and wholly distinct from the Banking Department and its assets are not subject to any liability other than the liabilities of the Issue Department. The assets of the Issue Department consist of gold coin, gold bullion, sterling securities, rupee coin and rupee securities equal in value to the total amount of the liability.

The Reserve Bank of India now controls the money-market by acting as a bankers' bank to the Government and the other banks in the country and by taking over the balances and cash reserves of commercial banks and by granting them loans and rediscount facilities. It helps to bring out the necessary expansion and contraction of currency in consonance with the requirements of trade and business at any given time.

A special agricultural credit department has been created with the Bank the main function of which is to co-ordinate the operations of the Bank in connection with agricultural credit and its relations with provincial co-operative banks or any other bank or organization

The mercantile traffic by sea, however, was gradually abandoned after the tenth century. But on account of the establishment of good means of communication through the North-West Frontier the overland trade of India showed a considerable improvement. Moreover, with the opening of good roads during the Mohammadan period and the utilization of the river-system as a means of transporting agency together with the patronage extended by the nobility and the ruling chiefs specially in the production of luxury goods, the internal trade of the country showed a considerable increase in value and volume.

The revival of foreign maritime, however, took place in 1498 with the classic discovery of the sea route round the Cape of Good Hope. In the succeeding centuries the leading maritime nations of Europe competed with one another for appropriating the largest share of the Indian commercial trade. But by the end of the eighteenth century the English East India Company was completely successful in driving other companies out of the competitive arena. In the nineteenth century, the foreign trade of India showed a considerable expansion due to the invention of steamships, opening of the Suez Canal in 1869, the construction of a network of roads and railways in India and the increased political security afforded by the newly-established Government for the commercial development of the country. But the direction and the nature of India's foreign trade underwent a considerable change, a change which proved in many a respect detrimental to the country as a whole. India which had hitherto for centuries exported manufactured products to all the countries of the world gradually became, due to economic disabilities, dependent for those very articles upon the foreign industries. India became an exporting country of raw materials and food materials to feed the growing industries and population of the industrial countries of the West and she has not been able to recoup so far, her former position of unrivalled supremacy.

But whilst India is pre-eminently an agricultural country, she ranks as one of the great industrial countries

dustrial needs want protection and not a policy of Imperial Preference. The country will gain by having bi-lateral commercial treaties with foreign countries instead of preferential duties on import and export trade. The Indo-Japanese Trade Agreement and Lees-Mody Pact mark "a further stage in the trend of economic intercourse from competition to agreements."

The War in the West and the entry of Japan into the War and the consequent dislocation of shipping in the Pacific have changed the quantum of goods in our international trade. The total value of exports to foreign countries of Indian merchandise was Rs. 187 crores in 1940-41 as compared with Rs. 212 crores in the first year of the War. The total value of imports in 1940-41 was Rs. 175 crores as compared with Rs. 161 crores in the first year of the War. The recorded balance of trade was favourable to India to the extent of Rs. 12 crores as compared with Rs. 51 crores in the first year of the War. "The mere fact that the figures of the foreign trade of a country have grown is, however, not in itself a proof of a corresponding growth of prosperity. The nature of the commodities exchanged must, therefore, be carefully examined before arriving at a conclusion regarding the real advantages of foreign trade."

Chief Characteristics of the Foreign Trade

The important characteristics of India's foreign trade may be briefly mentioned as follows :—

1. The first important feature of India's foreign trade that can hardly escape anybody's notice is, that her principal exports consist of food materials and raw materials while her imports consist almost wholly of manufactured articles. She exports raw cotton in huge quantities to Japan and the United Kingdom but only to import it in the form of manufactured cotton piece-goods. She exports oil seeds to European countries only to get them back in the form of purified oils. Metallic ores are exported but pure metals are imported. Hides and skins are sent abroad for treatment. This shows the predominance of agriculture and the acute dependence on foreign countries for the supply of machinery and other manufactured goods.

2 Another important feature is that under normal condition of trade and commerce our exports are in excess of imports, so that the balance of trade is always favourable to India. The excess of exports is almost made obligatory on the part of India due to her political subjection and having contracted debts in foreign countries for a variety of purposes. A large portion of the excess is accounted for the settlement of Home Charges which the Government of India have to incur in England. A large payment has also to be made for the services rendered by the foreign bankers, European shipping, insurance companies, etc., in the movement of articles of merchandise from and into India. However, a portion of the excess is imported in the form of gold and silver.

3 As a result of the invention of steamships making possible the carriage of cargoes at cheap charges, the sea-borne trade of India has come to occupy a very large and prominent position in the foreign trade of India, her overland trade over trans-frontier countries having paled into insignificance.

4 Although India maintains her external trade with most of the important countries and islands of the world, the bulk of our foreign trade is carried on with the United Kingdom. Out of the total imports in 1939-40 about 40 per cent imports into India come mainly from the United Kingdom and 32 per cent of exports were taken by the United Kingdom.

5 In spite of an extensive foreign trade it is a gloomy feature to observe that about 98 per cent of the sea borne trade is carried on by non-Indians in foreign ships and thus, a highly lucrative field of investment, employment and earnings is taken away from the hands of Indians. As late as the beginning of the nineteenth century, Indians plied their own ships between different seaports of India and carried cargoes to European countries. The development of Indian shipping industry as desirable in the interest of Indian foreign and coastal trade.

Chief Articles of Import

The following table shows the comparative importance of the principal articles imported into British India,

IMPORTS

(In thousands of rupees)

Articles	1939-40	Percentage on total imports in 1939-40
Cotton and cotton goods ...	22,10,34	13·37
Grain, pulse and flour ...	21,80,54	13·19
Oils	18,62,31	11·27
Machinery and millwork ...	14,66,95	8·88
Metals and ores ...	10,87,30	6·58
Vehicles	6,87,07	4·16
Instruments, apparatus and appliances	5,57,79	3·37
Artificial silk	4,58,68	2·78
Chemicals	4,51,76	2·73
Dyeing and tanning substances ...	3,60,86	2·18
Paper and pasteboard ...	3,45,92	2·09
Sugar	3,31,58	2·01
Wood and timber	2,69,73	1·63
Provisions and oilman's stores ...	2,63,48	1·59
Drugs and medicines ...	2,61,21	1·58
Spices	2,54,50	1·54
Hardware	2,26,86	1·37
Liquors	2,19,15	1·33
Wool, raw and manufactured ...	2,16,30	1·31
Silk, raw and manufactured ...	1,82,21	1·10
Rubber manufactures ...	1,48,42	0·90
Manures	1,25,15	0·76
Fruits and Vegetables ...	1,21,28	0·74
Tobacco	1,16,97	0·71
Paints and painter's material ...	1,02,55	0·62
Glass and glassware ...	1,01,77	0·62
Precious stones and pearls unset...	87,80	0·53
All other articles	18,28,01	11·05
Total value of imports ..	1,65,27,49	100

In the wake of trade depression that overshadowed the world in 1929, India could not escape the shock as the total value of her external trade suffered an enormous contraction. According to an expert authority 'the total value of world trade in the third quarter of 1932 was only about one-third of the corresponding period of 1929'

Cotton manufactures

Cotton manufactures and yarn are imported mainly from the United Kingdom and Japan, the latter proving a serious rival to the former in the Indian market. Imports of cotton piece goods amounted to 579 million yards of which 394 million yards were supplied by Japan. The imports of twist and yarn were valued at Rs 352 lakhs while cotton manufactures were valued at Rs 11,53 lakhs. Of the total quantity of piece-goods imported into India, Bengal received 31 per cent, Bombay 28 per cent, Sind 25 per cent, Madras 7 per cent, and Burma 9 per cent. The imports in cotton goods have declined considerably due to the war and to the extended use of the Indian mill-made articles by the people. The Khadi Movement has also provided a fillip to the neglected handloom weaving industry with the result that about one-fourth of the total demand for cloth is met by this industry.

Metals, Machinery and Hardware

India imports every year large quantities of iron and steel notwithstanding the large output from our mines. Machinery for cotton, jute, sugar, paper, electrical plant, sewing machines, hardware, etc., are imported from the United Kingdom, the U S A, and Germany. The number of motor cars imported in the year 1939-1940 was 9972. 5314 cars were imported from the United Kingdom, 2969 from the U S A, 963 from Canada, and the rest from Italy and France. The number of cars on Indian roads is steadily increasing. It was 174,077 in 1940.

Oils

Mineral oils are mainly imported from the United States, Russia and Persia. The share of the United States which was about 60 per cent of the total imports has now considerably declined while that of Russia and Persia is

on the increase. The total imports of mineral oils of all kinds is steadily increasing and was 463 million gallons in 1939-40 valued at Rs 17,13 lakhs.

Silk, Wool, etc.

Artificial silk is imported mainly from Japan and its consumption in India has increased due to its cheapness. Piece-goods made entirely of artificial silk amounted to 89.7 million yards while that of pure silk amounted to 22.9 million yards. Imports of raw silk and yarn were 280 lakh lbs., that of artificial silk yarns were 3160 lakh lbs. The principal suppliers of silk both raw and manufactured are China, Japan, Italy and Switzerland. Wool, raw and manufactured is mainly imported from Australia, Persia and the United Kingdom. Japan for the first time in 1934-1935 captured the major share of the trade in woollen piece-goods, her share being 7.3 million yards as compared to the United Kingdom's share of 4.2 million yards. Japan is practically out of the market now.

Sugar

The imports of sugar have decreased considerably both in value and volume due to the increase in the number of sugar factories in India, since the time protection has been given to this industry against foreign competition. In 1924-1925 the value of the imported sugar was Rs. 21 crores while at present it is below Rs. 1 crore. India is the largest producer, importer and consumer of sugar in the world. The new Excise Duty of Rs 3 per cwt. it is feared, will affect the industry very adversely, but the war has changed the situation entirely.

Liquors

The total imports of wines were 4.3 million gallons while spirit to the extent of 1.1 million gallons was imported. The consumption of foreign liquors in India is increasing very rapidly. The prices have gone up very high due to the heavy decline of imports from many countries.

Drugs, Paper and Chemicals

The imports of these articles is on the decrease due to many Indian firms which have started the production of these commodities.

Chief Articles of Export

The following table shows the comparative importance of the principal articles exported from British India

EXPORTS (In thousands of rupees)

Articles	1939 1940		Percentage on total ex- ports in 1939 1940
Jute, raw ..	19,73,18		9.70
Jute manufactures ..	48,68,78		23.93
Cotton, raw and waste ..	31,04,15		15.26
Cotton manufactures ..	8,57,58		4.22
Tea ..	26,07,78		12.82
Seeds ..	11,89,53		5.85
Leather ..	7,69,13		3.78
Metals and Ores ..	6,45,25		3.17
Grain, Pulse and flour ..	5,07,37		2.49
Hides and Skins raw ..	4,08,85		2.01
Wool raw and manufactured ..	4,04,34		1.99
Tobacco ..	2,52,81		1.24
Fruits and Vegetables ..	2,36,94		1.16
Oil cakes ...	2,02,92		1.00
Coal and Coke ..	1,93,35		0.95
Lac ..	1,88,57		0.93
Mica ...	1,72,57		0.85
Oils ..	1,37,47		0.68
Coir ...	1,28,24		0.63
Spices ..	1,07,93		0.53
All other articles ...	13,80,80		6.79
Total value of exports ...	2,03,43,54		100

Jute, raw and manufactured

Raw jute is exported to Germany, the United Kingdom, Italy, France and the U S A while jute manufactures, consisting mainly of gunny bags and cloth, go to the U S A, Australia, Argentina and very small quantities to other countries. The total exports of gunny bags has increased from 402 million to 1211 million bags while the total yardage of gunny cloth has increased from 1053 million yards to 1,800 million yards. The total exports of raw jute amounted to over 1,651,000 tons. Owing to the war the demand for gunny bags has become tenfold.

Cotton, raw and manufactured

The largest proportion of our cotton goes to Japan, China, the United Kingdom and Italy. The export trade in yarn came to a close, owing to the Japanese spinning industry. Cotton manufactures are, however, exported to Persia, Afghanistan, Ceylon, Iraq, etc. Japan purchases about 1,056,000 bales of cotton annually while the United Kingdom's import of cotton from India has fallen considerably. Japan's entry into the war has stopped these exports. A vigorous policy of industrialization due to war with all the facilities that go to expedite the successful development of an industry is sure to promote the export trade in cotton piece-goods.

Grains, pulses and flour

India being an agricultural country exports rice (1,744,000 tons, about 90 per cent.) wheat, (21,000 tons, 7 per cent.) pulses, (1,12,000 tons) maize, barley, etc., in small quantities to many countries such as the United Kingdom, Germany, Japan and China. The export trade of food-grains is losing ground in the Western countries due to the increase in the production of these commodities in other places and secondly due to many restrictions that have been put by many countries to check the imports of food grains.

Tea

The largest customer of tea is the United Kingdom, taking about 90 per cent. of the tea exported from India ; our other customers are Canada, Persia, New Zealand, Australia, the U. S. A., etc. Exports to the United Kingdom during the year 1939-40 amounted to 287 million lbs. valued at Rs. 18 crores on the outbreak of war, the Government of the U. P. took out the whole stock in that country and prohibited all exports.

Oil seeds

The more important varieties of seeds exported are linseed, groundnut rapeseed, castor, sesamum and cotton seed. The total exports are now declining and have come down to 849,000 tons as compared to 1,124,300 tons in 1933-1934. This is a good sign as India needs her oil seeds for herself.

Hides and skins

The total shipment of raw hides amounted to 31,700 tons. The trade in raw skin is declining.

Metal ores and lac

The total exports of metals and ores amounted to 1,545,000 tons valued at Rs 645 lakhs. Manganese and pig-iron are the chief ores exported. Shellac is exported in small quantities.

BALANCE OF TRADE AND ACCOUNTS

The turn-over of India's overseas trade is changing very rapidly due to the international situation created by the war. Exports and imports to and from many countries have stopped altogether. The total value of exports to Empire countries rose to Rs. 121 crores in 1940-1941 while imports from Empire countries in the same year amounted in value to Rs 99 crores. Imports from the U S A under Lease Lend are increasing very rapidly every month.

The visible balance of trade always remains in favour of India. It was Rs 38 crores in 1939-40 as compared to Rs 12 crores in 1940-41.

Large quantities of private treasures chiefly gold are exported every year. The true balance of trade cannot be estimated by the exports and imports of merchandise alone. Our visible excess of exports has to pay for many invisible imports such as Home Charges, etc. The following balance of accounts should be taken into consideration to arrive at a real balance of trade during any particular year.

Exports (Credit side)		Imports (Debit side)	
1	Value of merchandise	1	Value of merchandise
2	Private borrowings in other countries	2	Payment of interest and principal
3	Government borrowings abroad	3	Payment of interest and principal by Government

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|---|--|
| 4. Private remittances of money for meeting expenses of schools, mission houses and churches. | 4. Remittances to meet the expenses of Indian students and tourists abroad. Money sent by merchants and others for their dependants in foreign countries. |
| 5. Expenses by tourists in India coming from other places. | 5. Home Charges—pensions, pay and furlough allowances of servants abroad, expenses of India Office, Capitation Charges and store purchases. |
| 6. Miscellaneous receipts of money from foreign countries. | 6. Commissions and premiums paid to banks and Insurance Companies.
7. Freight charges paid to foreign ships.
8. Miscellaneous payments to foreign countries. |

The Direction of India's Trade

It has been already pointed out that the United Kingdom has been the greatest customer in the import and export trade of India. During years, preceding the Great War, the share of the United Kingdom in the import trade of India was formidable amounting to about 64 per cent. of the total imports. But during and after the War the share of the United Kingdom declined considerably in face of the competition from the industrially advanced countries like the United States, Germany, Japan and Belgium. The extent of the fall can easily be realized from the fact that in 1931-32 the percentage share of the United Kingdom in our import trade was 35·5 only. But as a result of the Ottawa Agreement entered into by the Government of India with His Majesty's Government whereby some of the British products are admitted into India at preferential rates, the United Kingdom has been successful to a certain extent in establishing her markets again. Germany, the United States, Italy, and Belgium are losing their Indian market. On the other hand,

Japan is trying to dominate our market threatening the very existence of the industrial enterprises in India

On the export side, the United Kingdom is the largest purchaser of Indian goods. In recent years her share in our export trade is increasing. But our exports to other countries have declined during the same period.

Internal Trade

Like the United States of America and China, India comprises an extensive area of about 1,800,000 square miles and offers an immense scope for internal trade. Internal trade of the country may be classified into two groups (1) Inland trade, and (2) Coastal trade.

Inland Trade

In view of the continental divisions of the country, her huge population, her excellent physical features, diverse climatic conditions and vast natural resources, the inland trade of the country both in volume and in value far outweighs the external trade of India. Unlike foreign trade, inland trade is mainly carried on by Indians. The inland trade is mainly concerned with supplying the surplus produce of one part of the country to another requiring the services of a large chain of middlemen, traders, merchants, shopkeepers, village traders and hawkers. Mainly, as a result of the peace and security afforded by the stable government, opening of arterial and feeder roads, trunk and branch railways, development of credit and banking facilities, construction of great irrigation works for ensuring the steady harvests of the agriculturists and the utilization of the productive resources on modern organized lines, the inland commerce of the country has shown an immense increase during the last fifty years. Although no accurate and reliable statistics are available for ascertaining the volume and value of internal trade, it is estimated to be at least five or six times more than the foreign trade of the country. There lies an immense scope for the development of inland trade with the specialization in agricultural production, industrialization of the country and improvements in the various means of communication and transport.

Coastal Trade

The coastal trade carried on between the different seaports on the extensive coastline of India is of no mean importance. The coasting trade is mostly concerned with the transference of agricultural and industrial products, and with the distribution of imported articles from one port to another in British India or Native States. The total coastal trade in 1939-40 was valued at about Rs. 300 crores. The coastal trade between Burma and other ports of India, particularly Calcutta, Bombay and Karachi is of special importance inasmuch as trade by land is hampered owing to the impenetrable mountains and forests existing between Burma and India. By developing harbour facilities, wherever they are not available at present and by building up an Indian Mercantile Marine, the coastal trade can be developed to greater dimensions.

To avoid unfair competition, e.g., rate, cutting, grant of rebates, etc., and to induce Indian capital being invested in coastal shipping, the Government of India has enacted the Coastal Traffic Act of 1937. It will create a strong Indian Mercantile Marine. All ships registered in the U. K. operating on the coast and between India and other countries, have been requisitioned by His Majesty's Government, but the policy adopted by the Government of India gives Indian registered ships more favourable condition of working to ensure the best utilization of Indian ships during the war emergency.

CHAPTER XXI

THE PROBLEM OF DISTRIBUTION

What is Distribution ?

In our preceding book, it has been shown that in order to produce wealth the producer employs certain factors of production. Now, all those agents which have united collectively to produce that wealth expect to be rewarded by a share of it.

There must be some laws or principles according to which the various agents of production should receive their remuneration in their productive activity. The principles upon which this wealth is distributed, apportioned or shared among the various factors of production, viz., land, labour, capital, organization and enterprise which collaborate in its production go by the name of the *Laws of Distribution*. 'The economics of distribution,' it is sometimes said, explains people's incomes. The assertion is broadly correct, but the economics of distribution is concerned primarily, not with *incomes*, but with the *earnings* of the several factors of production."

—Chapman

But the distribution of the wealth produced among the different factors of production in modern times of industrial organization is not so easy as it might look to a layman who would at once speak that each factor should be rewarded in proportion to its sacrifices. In fact, there is the rub, because it is not possible to separate the result of each individual's sacrifice from that of the entire group. Owing to group production where several agents of production differing both in quantity and quality co-operate in bringing about a common result, it is too difficult to determine the individual's contribution to final result. In the case of a peasant proprietor who

conducts every process of cultivation himself, the question of distribution does not arise as whatever remains after making allowance for the depreciation of his implements, stocks and capital, he is the rightful claimant of that. But in ordinary business of life we seldom come across with such an isolated type of productive activity. In a modern organized factory with a minute division of labour, all the combined resources of landowners, capitalists and labourers are used by an organizer who directs the production of wealth and rewards each factor without actually knowing its exact contribution to the final result. It is only after the Industrial Revolution that the problem of distribution has occupied a very prominent place in our economic studies. Various theories have been propounded to solve the conflicting problems of distribution but, in an elementary book of principles, it is hardly possible to write any thing on these intricate and lengthy controversies.

What is to be Distributed ?

Obviously, nothing more can be distributed than what is produced by the joint efforts of all the agents of production. Persons possessing a certain quantity of labour and capital work upon the natural resources to produce wealth but before the total wealth produced in an industry is available for distribution among the factors that have united in its production, it has got to meet two other claims which are equally important and noteworthy, viz.

1. Replacement of capital (both circulating and fixed) used up in the course of manufacturing a certain commodity.

2. Taxes levied by the State or the local authorities such as municipalities, etc.

A concrete example will better illustrate the meaning of what has been spoken above. Suppose a cultivator with a certain amount of labour and capital harvests a crop of, say Rs. 1,000 a year. Before this sum is available for distribution among those who have contributed in its production, he must deduct the price of the grain which he has used for seed otherwise no money for

seed shall be available for future crops. Again, he must cover the price of the wear and tear of the stock that has been used in the production of crops. If he fails to provide for the replacement of his implements and live-stock out of his total produce, a time must come when, in the absence of his stock which has been gradually worn out owing to its constant use, his productive activities will come to an end. As for example, if he has purchased a bullock for hundred rupees which expects to yield a service to the cultivator for ten years, he must set aside ten rupees annually so that after the termination of that period he may have the ready money to replace the old bullock by a new one. Similar is the case with his implements, buildings, wells, fences, etc., which deteriorate either through use or through the destructive agency of time. Such a fund which is set aside to make good the deterioration of the fixed capital goes by the technical name of 'depreciation fund'. Besides these amounts he must also deduct the amount of tax which he has to pay to the tax levying authorities. Thus after making allowances out of the 'gross product,' viz., Rs 1,000, for the replacement of the circulating capital (seed) at Rs 90 for the depreciation of the agricultural stock at Rs 55 and for the payment of taxes at Rs 15, there remains a net amount of Rs 860 available for distribution among those who have co-operated in the production of the crop. The balance which is available for distribution is called the 'net product' of the industry.

It must have been clear to the students by now that the amount which can be distributed as income among those who have taken part in any industrial enterprise is the 'net product' of the industry. In this way by calculating the 'net products' of the different industrial enterprises we can find out the total net product which is available for distribution among all the agents of production in a country. The total net product created by the productive efforts of community in a fixed period of time is generally called the *National Income* or *National Dividend*. "The labour and capital of the country, acting on its natural resources, produce annually a certain net

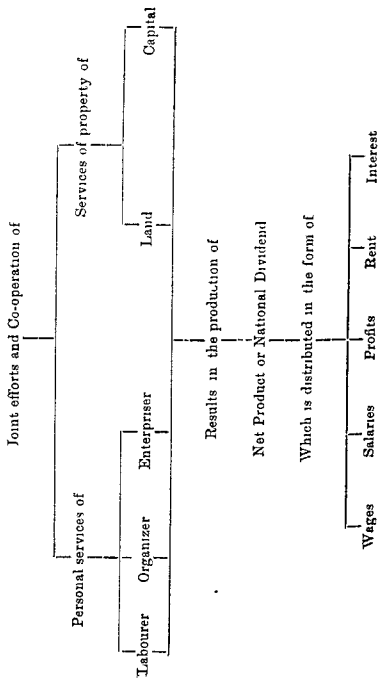
aggregate of commodities, material, and immaterial including services of all kinds. 'This is the true net annual income or revenue of the country.' The amount of national income determines the extent of consumption of the people living within a community—the greater the amount of National Dividend available within a community, the fuller is its consumption and *vice versa*.

The Shares in Distribution

While studying production, we have shown that land, labour, capital, organization and enterprise—all factors co-operate in the production of wealth and as such they are entitled to get a share out of the 'net product' of an industry in proportion to their respective contributions. A good many writers on the subject have expressed disharmonious opinions in respect of those who are the real contributors to wealth production. Some think, as Penson remarks aptly, that those who can be seen taking part in the work of the farm, the factory, or the office, are the only contributors; others consider that those should be included who have in any way assisted either by personal service or by placing their property at the disposal of the workers. But we must remember that if any one of the services which has either directly or indirectly contributed to the final result is not remunerated, it would cease to be employed. All the incomes which are derived from the net product of the business are payments for service, and without service rendered there is no income. Thus, the share that accrues to land is called 'Rent;'; the share that accrues to labour is called 'Wages;'; the share that accrues to capital is called 'Interest;'; the share that accrues to 'organization' is called 'Earnings of Management' or 'Salaries;'; and the share that goes to enterprise is called 'Profit.' It is with these different forms of shares that the problem of distribution is concerned, and while analyzing the system of distribution in the following chapters we shall consider separately the principles underlying the determination of each of these shares.

Different agents of production which render their services in the production of wealth and their corresponding remuneration are shown in the diagram.

HOW WEALTH IS PRODUCED AND DISTRIBUTED



In the same diagram, organization and enterprise have been divided into separate heads because sometimes the entrepreneur acts in more than one capacity. In a modern type of joint stock company which is the most typical form of industrial organization, the shareholders who are the real undertakers of risk render a twofold service. The management of the industry is being assigned to the salaried managers of good organizing capacities, whilst the shareholders contribute capital for which they get interest and for the risk which they undertake, they receive profits in the shape of dividends which are declared half-yearly or annually. It may be said here, therefore, that the income may be derived from more than one source. An individual may derive his income by providing one single factor or more than one factor in which case his income will depend upon the number of types of services he has rendered and a separate treatment of his income due to each factor will have to be made. For example, the income of a manual labourer consists exclusively of wages while that of a peasant proprietor who owns his own land, employs his own capital, organizes his farming operations and undertakes all risks consists of rent, interest, salary (earnings of management) and profits. Similarly, a managing proprietor may be said to have an income composed of interest, salary and profits since he provides not only capital but organization and enterprise also. Although all those who derive mixed income by getting more than one share from the different types of services, seldom care to draw any distinction between its component parts, all these various forms of income are quite distinct from one another and demand separate treatment.

General Theory of Distribution

Now we come to the more difficult question of how the net product is distributed among the various factors of production. On what principles the different factors are taken into service and evaluated? To deal in a more practical way, distribution takes place somewhat in the following manner. As a result of the demand for commodities by a community, indirectly there is also a demand for the various factors of production because

productivity of the agent he employs, i. é., the product of the final addition of the factor represents the demand price of that factor. On the supply side, the remuneration of each factor of production tends to equal its supply price. Between these two limits, like the price of a commodity, prices of each agent of production will be determined at the point where equilibrium is reached according to the relative strength of demand and supply existing at the time. So at any given time or place, the price paid for the service of any agent measures both its marginal productivity and its marginal supply price.

CHAPTER XXII

RENT

The Popular Meaning of Rent

In popular language, the word 'Rent' implies the periodical payment made by the tenant to the landlord or owner for the use of land, or houses and other loanable material agents such as machinery, forests, mines, and fisheries. The popular conception of rent is too vague and lacks scientific precision. In everyday language, the whole of the income accruing say, from the ownership of a house is erroneously termed as rent. The so-called rent can be divided by an economist into two distinct elements. The payment for the use of a house includes not only the amount paid for the site of the building which is known as economic rent, but it also includes payment for the investment of capital in the form of building and this latter return is not rent but interest. In this case, probably the proportion of income going to the house owner in the shape of true rent for the site is much smaller than the amount realized by him in the shape of interest, depreciation allowances, remuneration for risks, and profits for enterprise and management on his capital invested in the building. Similarly, a cultivator may think that he pays so much rent for his farm, not realizing that only a part of that is really rent, the rest is interest on the capital which has been invested by the landlord in farm-buildings, wells, drainage, etc.

Economic Rent

In Economics, however, 'rent' is used in a different and more precise sense. It is the income, either in money or in kind, accruing to the owner from the productive employment of any natural agent of production. Rent is the payment for the use of the original and indestructible powers of the soil and is measured by the differential advantages or surplus enjoyed by the superior

land and other objects, the supply of which cannot be increased at human will, over the less favoured ones. As Marshall observes, "the income derived from the ownership of land and other free gifts of nature is commonly called rent." It should be remembered that all the income resulting from the improvements made in or upon land by the landowners is called 'interest' in contradistinction to 'rent' which is purely a return from a natural agent of production. In the economic sense, it matters little whether it is paid by the tenant to the landlord, or by one person to another. As a matter of fact, the owner of the land may himself put it to some form of productive use, or may let it out to a tenant. In either case, he realizes an income which is known as 'rent.'

Economic rent is the producer's surplus which land and other natural gifts yield over cost. Let us illustrate the point in question with a concrete example. It is a common experience of all that lands vary in productivity owing to differences in natural fertility and situation. Suppose three plots of land X, Y and Z of equal size are cultivated by different tenants of similar ability. Let us further suppose that with the same amount of expenses say Rs. 50 (which exclude rent but include wages for their labour, depreciation allowances for their cattle and fixed capital, etc., and normal profits for their enterprise and management) the plots yield a produce amounting to Rs. 150, Rs. 100, and Rs. 50 respectively. The surplus after meeting all the expenses of production (i.e., Rs. 50) on the respective fields is as follows: X field yields a surplus of Rs. 100, Y field yields a surplus of Rs. 50 and Z field yields no surplus, as its produce just pays the expenses of production and no more. Now, the two former fields enjoy a differential advantage or surplus of Rs. 100, and Rs. 50 respectively over the Z field which, in Economics, is called the 'no-rent' land or land on the 'margin of cultivation.' It cannot afford to pay any rent for the produce obtained from it just meets its expenses of cultivation whereas the cultivators of X and Y fields can hand over the surplus of Rs. 100 and Rs. 50 respectively to the landlord from whom they have taken

his tenant pay for the use of land will be determined by the latter's estimate of the total proceeds of the produce arising from a particular field at a particular period of time. In order to find out the surplus he will deduct from the sale price of the produce all his expenses of cultivation and this surplus, which is in reality the economic rent, is the *maximum* that he can pay to the landlord. This maximum price varies with the character of the soil and its situation from the market. On the supply side, the landlord for his fields has got his *minimum* price got by him from an estimation of the probable amount of crops and produce, which would be raised on that land. If he failed to get this minimum he would rather prefer to cultivate his fields himself, or put it to some other use. Like the price of a commodity, the contract rent is fixed between these two points—the tenant's maximum and the landlord's minimum—by the higgling and bargaining of the two parties. If the demand for land is brisk among tenants, the rent will tend to reach the maximum of the tenant who needs it most and the landlord will have greater opportunities of exacting the full economic rent. If, on the contrary, there is little demand for land and the supply is greater, the rent will tend to approximate to the landlord's minimum and the tenants will have a stronger voice in bargaining.

Here it must be pointed out that in old countries which are heavily populated, and where pressure on land is acute owing to the dominance of agricultural population, the contract rent tends to approximate to the producer's surplus, i.e., to the economic rent. India and China afford good instances of this tendency. In our country, cases are not wanting where tenants besides paying the full economic rent are sometimes induced to part with a portion of their normal profits. The cultivators stick to their present condition because it gives them at least a living which they cannot hope to find in any other occupation. But in a country, where population is evenly distributed among different occupations and where mobility of labour and capital from a less profitable occupation to a more profitable occupation is fairly available, the

contract rents do not exceed economic rents Again, in new countries, where the supply of land is abundant and the demand for it is much small in consequence of the scanty population, the contract rent is likely to approach the minimum of the landlords

How Rent Arises: Ricardian Theory of Rent

Ricardo, a famous English economist of the classical school, formulated a theory of land-rent which, in essentials may be regarded as the basis of the modern theory of rent Land being the most typical form of natural agent, Ricardo confined his attention to it while explaining the nature and origin of rent His theory of rent is closely associated with the operation of the Law of Diminishing Returns Following the line of argument adopted by Ricardo, his theory may be summarized as follows

Let us suppose that an isolated tract of a country, hitherto quite out off from the rest of mankind, is newly colonised by a few settlers, and further assume that the land available in this tract is not of equal fertility but of different fertility say, A, B, C and D class land in merit of descending scale of quality In these circumstances, according to Ricardo, the most fertile and the most favourably situated lands are cultivated first and as long as the best quality of land (A class land) is available for cultivation on differential profit and, therefore, no rent will arise

With the increase in population and due to the inadequacy of the output of the first class land to meet the increased demand for the produce, a rise in the price of agricultural produce takes place, as a result of which land of inferior quality (B class land) comes into cultivation. This resort to the inferior soil is due to the operation of the Law of Diminishing Returns, if there were no diminishing returns, then all the produce necessary to satisfy the needs of the population would have been raised from A quality of land by cultivating it intensively As soon as the second quality of land is brought into cultivation, rent emerges and its amount will depend upon the difference in the produce raised on A and B qualities of land with equal doses of labour and capital

The land B is now said to be the land on the margin of cultivation. It just pays for the expenses of production and yields no surplus to be paid as rent. To illustrate this in a numerical form, we may assume that with an equal amount of expenditure and with the same methods of cultivation, the A class land yields a return of 40 seers of wheat while the B class land yields only 30 seers. The cost of production of wheat on the B class land being higher than the A class land, the price which rules in the market must cover the expenses on the B class land. The land A enjoys a surplus gain of 10 seers of wheat which is known as economic rent. The B class land does not enjoy any surplus and is classed as a no rent land.

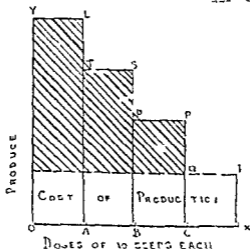
With the lapse of time as the population goes on increasing, it becomes necessary to cultivate still inferior soils, viz, the C class land. It yields a smaller quantity of produce as compared to the B class land with the same doses of labour and capital. The B class land will begin to bear a rent equal to the difference in the produce raised on it and the C class land while the land A will pay a higher rent due to the increase in the surplus enjoyed by it over the C class land.

With every fall in the margin of cultivation, rent increases. When the D class land is cultivated, the other three lands A, B and C become superior lands and begin to bear rents equal to the surpluses enjoyed by them over the D class land. "With every step in the progress of population, which shall oblige a country to have recourse to land of a worse quality to enable it to raise its full supply, rent on all the more fertile lands will rise," and will always be equal to the difference between the produce of a given quantity of labour and capital on the more fertile land and the marginal land at any given time.

The price of all agricultural produce is determined by the cost of production on the land which is on the margin of cultivation, if the produce raised on this land is required to satisfy the needs of the community. It enjoys no surplus and hence could not afford to pay any rent. Rent is not an element in the cost of production of the produce raised on the marginal land and, therefore, it does not enter into the price of the agricultural produce. "The

exchangeable value of all commodities whether they may be manufactured or the produce of land, is always regulated by those who continue to produce them under the most unfavourable circumstances.... . corn is not high because a rent is paid but a rent is paid because corn is high "

The Ricardian theory of rent embraces two margins—a resort to inferior lands leading to an extensive margin of cultivation and the Law of Diminishing Returns leading to an intensive margin of cultivation. When additional doses of labour and capital are applied to the existing lands instead of taking recourse to inferior lands, the system of cultivation is known as intensive cultivation. In conformity with the Law of Diminishing Returns the successive doses of labour and capital, applied on the same piece of land, will yield a diminished produce and a stage will soon be reached when the extra produce will just remunerate the additional doses of labour and capital applied to it. The dose of labour and capital which just remunerates the cultivator is called the marginal dose and regulates the price of agricultural produce in the market. The surplus enjoyed by the previous doses is a differential



gain and is an economic rent under intensive cultivation. Even if all lands were of the same quality or if a supply of the best lands were unlimited, there would have been

rents due to the operation of the Law of Diminishing Returns and the fall in the intensive margin of cultivation.

Bearing in mind the result of our previous discussion, the theory of rent can be illustrated by the diagram on page 456.

On the X-axis we have taken the successive doses of labour and capital applied to the same class of land and on the Y-axis we calculate the respective returns. The first dose of OA yields an output of 40 seers indicated by rectangle OALY; the second dose AB yields an output of 30 seers indicated by rectangle ABST; the third dose yields an output of 20 seers shown by rectangle BCRP, and the fourth dose CX yields an output of 10 seers represented by rectangle CXPQ. The fourth dose is assumed to be a marginal dose yielding only a marginal produce as is indicated by the line drawn through PQ. As the marginal dose CX determines the price of the whole product, therefore, the shaded area represents the rent of the whole of the land which can be claimed by the landowner in consequence of the operation of competitive forces. The total produce realized from successive doses up to the margin is $40 + 30 + 20 + 10$ or 100 seers of wheat and the cost of four doses incurred in its raising is 10×4 or 40 seers of wheat. Therefore, the *economic rent* under these circumstances is $100 - 40$ or 60 seers of wheat which can be exacted by the landowner, if the competition between the landlord and the tenants is in its full swing.

Margin of Cultivation

The conception of margin of cultivation is not a static one. Any change in the price of the produce brings about a change in the margin of cultivation. A slight rise or fall in the price of the produce may change the status of the marginal land into a super-marginal or sub-marginal land. With a rise in the price of the produce it becomes profitable to extend both extensive and intensive margins of cultivation as the extra rise in the price of the produce enables even sub-marginal cultivators to supply their produce in the market. Similarly, a fall in the price of the produce would lead to a contraction of the margins under both the systems of cultivation, as the lower prices would bring smaller amounts of money which would not remunerate

the expenses of marginal doses either on more fertile lands intensively cultivated or on lands at the margin of extensive cultivation

Criticism of the Ricardian Theory

Accordingly, Ricardo considered rent as that portion of the produce of the soil which goes to the landlord 'for the use of the original and indestructible powers of the soil' 'The comparative scarcity of the most fertile lands' he maintained is the cause of rent' His theory about the nature and origin of rent has been attacked by several economists who have pointed out that the order of cultivation from richer to the poorer lands as assumed by Ricardo, is historically untrue. On the contrary, they maintain that the work of cultivation invariably commences on the poorer soils passing on to the richer soils as population increases and show that at first men take up poor soils because they are light and easier to cultivate. But it must be stressed that the order of cultivation by which he enunciated the phenomenon of rent is not the essence of the theory all he wants to prove is the fact that rent is a differential natural return of the fertile land over the inferior one. The productivity of land is a relative conception. If a certain amount of capital and labour will yield more when applied to a light than to a heavy soil, the light soil is, in the sense of the Ricardo's theory of rent, the more fruitful, although it may be possible to produce more on the heavier soil by applying a greater amount of labour. He understood by the best land, the land which gives the maximum yield in return for the minimum amount of labour. Another objection made to the theory is that original powers of the soil, in an old country, are not capable of an easy measurement. It cannot be found out how much of the produce is due to the 'original and indestructible powers of the soil' and how much to the improvements that have been effected over it. Again, the word 'indestructible' is misleading as the fertility of land is exhaustible, if it is continuously ploughed. But excluding fertility, there are other qualities of the soil such as the climate, the extent, the situation, etc., which are practically indestructible and which play no mean part in determining the differential advantages. Therefore, the theory

and it has been justly observed that no reduction would take place in the price of corn although landlords should forego the whole of their rent. "That corn which is produced by the greatest quantity of labour is the regulator of the price of corn, and rent does not enter in the least degree as a component part of its price." Certainly rent enters into price in the sense that rents are paid out of the sums received in the form of the prices paid for things. But it does not enter into price in the sense that it governs price of the produce, or that it is one of the elements of cost which determines the supply price of anything.

Consider again the rent of a shop situated in the centre of a market for which the shopkeeper pays to the landlord a high rent in comparison to another whose shop is not so favourably situated from the point of view of marketing. The former shopkeeper charges high prices from his customers not because he has to pay a high rent but because he could get high prices for his articles, irrespective of the amount of rent he has to pay, from his customers owing to the convenient situation occupied by that shopkeeper. Therefore, high rent which is due to the favourable situation is the effect of high price and not its cause.

When does rent enter into price ?

There are, however, certain circumstances under which rent does enter into price. It has been pointed out that marginal land does not bear rent, for its produce is only just enough to cover the expenses of cultivation including normal wages and profits of the cultivator. But when rent comes to form a part of the marginal cost of production, it will enter into the price of the produce.

1. If the State which has the monopoly of land in a country, forces the tenants cultivating the worst types of lands to pay rent, then this portion of rent will form a part of the price of the agricultural produce. Similar results follow when landlords combine together and charge monopoly rent even for the worst land. This rent, when it forms a part of the marginal expenses of production, affects the price of agricultural produce.

2 If a land is paying rent under wheat cultivation and if it is brought in use for sugarcane cultivation, it will have to pay the same rent which it was bearing formerly even though for the latter type of cultivation, the land becomes a marginal one. The marginal sugarcane producer will have to pay the same amount of rent to the landowner which he was formerly getting and so this rent paid for the marginal land will affect the prices of sugarcane in the long run.

Rent of Building Sites

The rent of building sites is determined in accordance with the principles already explained. "There are no-rent building plots in abundance. Every township has its squatters whose cabins, placed out of the way on worthless land, pay no rent. Even in the neighbourhood of large cities, shanties are perched on the rocks without objections from the owners of land which, in another twenty or fifty years, may bear a high rent." The rent of buildings depends almost entirely upon the relative advantages of situation and productivity (residential or business advantages) of the various sites, and may be regarded as being measured upwards from no-rent waste land which is useless for building purposes. It must not be forgotten that the rent of a house (or other building) is a composite income of which one part consists of rent for the site and the other of interest on the invested capital in the building. Here we take into consideration "ground rent" only.

As regards rents for residential purposes, the superiority of one site over the other consists in natural beauty, healthiness, convenience and fashionableness of the locality under consideration. Fashionable localities, where rich and well-to-do people reside, command high 'ground rent.' In regard to business sites, situation plays an important part in determining the economic rent of the site. Situation implies such qualities as convenience, fashionableness, intensity of traffic, etc., which attract a large number of customers. Convenient localities, where fashionable and rich classes do their shopping, command higher ground rent than those which are less favourably situated. For instance, the occupier of a shop in such a

great shopping thoroughfare as Chandni Chowk, Delhi, will be made to pay a far bigger economic rent than the occupier of a similar sized shop in a less known area of the city. Landlords charge high economic rent in the former case because they know that the shopkeeper can charge high prices or obtain a very large turnover owing to the convenient and fashionable place of shopping. The high prices are not due to the high rents but due to the differential advantages of situation.

Rent of Mines, Quarries and Fisheries

The law of rent is not entirely applicable in the case of mines and quarries which differ from the farming lands in that the latter will retain their fertility and continue to yield harvests year after year indefinitely, if properly worked, whereas the former contain fixed stores which once worked get exhausted after a time for ever. The rent paid for mines and quarries includes (a) payment known as Royalty or Nazrana or compensation for the material removed, and (b) a differential payment analogous to rent in respect of convenience of situation and facilities of working. In the latter respect mine rents resemble agricultural rents. Of two mines which yield similar quality of product with a given amount of labour and capital, that one will command a higher economic rent which is better placed in respect of markets, etc. Hence, the payments made to the owner of a mine for the differential advantages are certainly of the nature of rent. The rent of mines, like farming lands, is measured upwards from the marginal mines which just cover the expenses of production incurred in the extraction of minerals and yield no surplus for rent. Above these are mines which pay rent according to their productivity and situational advantages. The Law of Diminishing Returns operates in the case of mines as in farming lands leading to an extensive as well as an intensive margin. With a slight increase in demand for mineral products, less convenient and inferior mines may be taken up for extraction, and in the superior mines more doses of labour and capital in the shape of more costly and improved methods may be applied for the extraction of additional products.

2. Improved Means of Transport. The improved means of transport and communication influence rents in a variety of ways in different localities. Owing to the reduction in the cost of transport, the surplus produce grown on more distant fertile lands will compete successfully with the produce grown on less fertile lands as a result of which the prices of agricultural produce will go down ; when prices tend to fall, inferior lands will be abandoned, margin of cultivation would ascend and consequently rents would fall. An area, where agricultural products are raised in sufficient quantities and prices are generally low, if connected by an improved and cheap system of transport to a new area where the agricultural products can be sold at a higher price, then the rents in the former area will tend to rise and in the latter tend to fall. Accordingly, when England and other industrial countries of the West were linked up with America, Canada and India by means of cheap railways and steamships, rents in the latter group began to rise in consequence of a rise in the prices of agricultural produce while in England inferior lands which were on the margin of cultivation were forced out of cultivation causing rents to fall down.

3. An Increase in Population. An increase in population, other things being equal, will lead to an increased demand for produce causing prices to rise. This rise in prices will enable cultivators to bring into cultivation inferior classes of land extensively and to apply more doses of labour and capital intensively on the land already under cultivation. Hence, a fall in the margin of cultivation tends to raise rents all round. Secondly, the pressure of population on land encourages the use of land for purposes other than the production of food materials, and, therefore, its value rises in view of its limited quantity. This tendency may be temporarily counteracted by improvements in the arts of cultivation and the opening up of the improved means of communication and transport but, in the long run, when land ceases to respond to additional doses of labour and capital increasing population will have a tendency to increase rents.

4. The Advance of Civilization. The growth of wealth

and prosperity within a country leads to an increased demand for land in a variety of ways and, therefore rents will rise. In the first place, the improved standard of life of people means a more varied and increased consumption such as of food and clothing which will lead to a greater demand for the produce of land and consequently rents will tend to rise. Again, a greater demand for recreation grounds, pleasure gardens and for other hundreds of requirements which are a necessary accompaniment of civilization bring about a shortage of farming land as a result of which the remaining agricultural lands will have to bear a higher rent.

The Unearned Increment of Land

At this stage of their study, students can easily follow the meaning of the 'unearned increment' of land. With a rapid growth of population, an increased economic prosperity and security of the people, and the opening up of cheap and efficient means of transport and communication, there arises a heavy demand not only for agricultural land but also for land meant for residential quarters, recreation playgrounds, shops and industrial establishments. When demand for land increases and its supply is limited, naturally prices and rents must rise. As the margin of cultivation goes down, the value of agricultural rises without any effort on the part of the landowner. This kind of accretion in the value of land which is due to the social and economic progress, and is not due to any sacrifices of the landowner is known as the 'unearned increment of land'. But if any increment in value of land takes place due to personal sacrifices of labour and capital, then it would be called the 'earned increment' in contradistinction to the unearned increment which accrues to him without any personal sacrifices.

The phenomenon of the unearned increment of land may be treated in a more simple manner. Imagine a landlord owning a few thousand acres of land in a rural tract from which he draws a meagre subsistence owing to its unculturable nature, and around his estate lies a most fruitful plain growing sugar, cotton and other industrial products in abundance but hitherto not served by any railway. The railway authorities, realizing the possibilities

of future agriculture, trade and industries, appoint engineers who after making a survey of the area find out the proper alignment, and luckily decide to construct a station in the estate of the said landlord. The intelligent industrialists having full foresight and energy take the opportunity by the forelock and work out schemes for floating new sugar, cotton and other concerns, in view of the promising profits held out by the proximity of raw materials. All the time the said landlord is sleeping; he does not know what is going on behind the curtains. The industrialists approach the landlord and all insist to have a favourable situation for their concerns as a result of which competition sets in and prices tend to rise high. The increment in the value of land is not the product of any labour undergone by the landlord but the special economic circumstances have helped in the accretion of such value. With the growth of industries and congregation of large number of workers and businessmen, a heavy demand for residential quarters, shops, educational institutions and recreation grounds would arise. In view of the limited supply of land, its value would soar high without any effort on the part of the land owner.

This unearned income is not the product of landowner's labour and is consequently anti-social. "He does not produce rent, but simply accepts it." On this ground, some economists advocate its appropriation by the State through taxation. They contend why the landlord should be solely allowed to enjoy this surplus of land value when it is due to the growth and progress of society and not due to any sacrifices of his own. Socialists have come forward with their schemes of 'Land Nationalization' by which they advocate the ownership of land by the State and the extinction of all private proprietary rights in land.

These questions are of a more controversial nature, and will engage the attention of students in their advanced studies of economic theory and socialism.

Applicability of the Law of Rent to India

The law of rent is that the rent paid by a tenant, under free and perfect competition and freedom of con-

tract, tends to be so determined by the forces of demand and supply that it approximates to the pure economic rent. It assumes perfect freedom of contract and enterprise amongst the landlords and the tenants. Let us now proceed to study, in brief, how far rents in India approximate to true economic rent, and how far they are influenced by the law of rent as enunciated above. Taking the peculiar circumstances of the country such as the existence of elaborate tenancy laws relating to the various rights of tenants existing in the land, the peculiar social constitution of society and the absence of perfect freedom of contract and enterprise, we may, without any fear of contradiction, say that the operation of the law of rent in India is modified to a considerable degree. Before the advent of the British administration, there was a relative scarcity of tenants and the relations between the landlords and their tenants were very cordial. Rents at that time were mainly determined by custom and were paid in kind, but with the establishment of the British rule and the consequent peace and security, instead of the chaotic conditions that prevailed in the pre-British period, as the population, trade and commerce increased, *competition* began to play its important role in the determination of rent. The landlords loosening their traditional ties of relationship in their self-aggrandisement began rack renting of the necessitous and ignorant tenantry charging much higher rents than the customary level. The competition was one-sided, as the demand for land was great owing to an increase of population and its predominant dependence for its livelihood on land due to the relative scarcity of other occupations. This factor enabled the landlords to exact much more than the economic rent—a phenomenon which not only impoverished the tenantry but also jeopardized the very basis of the agricultural industry because the cultivators lost all interest in the preservation of the productivity of land as the extra produce resultant upon the improvements effected by them would be pocketed by the landlords. This rack renting necessitated State intervention in the relations between the landlords and their tenants. A series of Tenancy Acts were in course of time enacted by the Government

in order to secure for the tenant cultivators *fair rents* and a *fixity of tenure*.

The rent legislation has started from the basis of custom and has eliminated the evil tendencies of unfair and unfettered competition. In the *ryotwari* tracts of the provinces of Bombay, Burma and the greater parts of Madras and Assam the question of rent does not arise at all as the *ryot* who holds his right in land from Government pays revenue—and not rent—for its use directly, without any intermediary as in the case of the *zamindari* tracts, to the treasury of the State on terms and conditions regulated by the State authorities. In such tracts, where subletting is practised on by the *ryots* who hold large acres of land, tenants are not only stripped off the whole of the economic rent but also some portion of the remuneration got by their own labour and enterprise as well, which would have been theirs under free conditions of contract and enterprise. Again, as a result of the several tenancy laws found operating in the permanently as well as the temporarily settled *zamindari* provinces of Bengal, Bihar and Orissa, the Central Provinces, the Punjab and the United Provinces, various kinds of privileged tenants below the landlords have come into existence such as Permanent tenure-holders, Fixed-rate tenants, Ex-proprietary tenants, Occupancy tenants and Statutory tenants in whose case the revision or enhancement of rent does not depend on the sweet-will of the *zamiidar* and consequently in their case too the law of rent does not hold good as its working is checked by a number of legal safeguards. The unprivileged tenants such as the tenants-at-will who get no protection of the law are the worst sufferers, as they have to pay frequently more than the true economic rent.

Thus, it may be summarized that agricultural rents in India are determined by custom, competition and legislation. The applicability of the law of rent in India as stated by economists is not allowed as it is definitely checked by custom and legislation.

Land Tenures in the United Provinces

In India, where the ownership of land is still a vexed question, and the landlord's rights of the absolute ownership of the soil are disputed due to the superior rights of

the Government of this country, the term 'land tenure' gives a different and a peculiar sense. By 'land tenure' we mean the rights and liabilities under which the landlord, for the collection of revenue or for the letting of his land to the tenant cultivators, holds his land from the Government which is in theory the real proprietor of all the land available in the country while ordinarily land tenure means the terms or conditions on which the cultivator cultivates the holding. We have, therefore, to recognize two kinds of land tenures in India, viz., proprietary tenures and cultivating tenures. The important types of proprietary land tenures from the point of view of land revenue assessment are the (i) Zamindari Tenure, (ii) Mahalwari or Joint village tenure, (iii) Ryotwari Tenure, of which the first two systems are found in the United Provinces.

(i) *The Zamindari Tenure* Under this system the State deals directly with the Zamindar who is held responsible for the regular payment of the Government revenue. The settlement is either permanent such as in Bengal, Bihar, north east of Madras, and the Benares Division of the United Provinces where the amount of revenue payable by the landlord has been fixed in perpetuity, or temporary such as in Oudh where the rates of revenue assessed by the Government on the Taluqdars are liable to be revised and increased too on the expiry of the settlement if there is any rise in the productivity of the soil or a rise in the prices of agricultural crops.

(ii) *The Mahalwari or Joint village Tenure* In this system, the Government, instead of entering into contract with a big landlord who holds large estates together, assess the revenue upon the co sharers, holding a portion of a village, as a single village or even more than one village, who are held jointly and severally responsible for its payment to the Government treasury. This system prevails in the villages of Agra and in non-taluqdar villages of Oudh. The revenue is fixed with a village community for a period of thirty years after which the rates of revenue are liable to be revised. But the real person responsible for the payment of land revenue to

the State is the *lambardar* or *malguzar* who enters into contract with the Government to pay the revenue on behalf of the villagers owning shares in the estate. As we are mainly concerned with the system of land tenures prevailing in the United Provinces, it would be wise, therefore, in this connection to examine in details the various types of proprietary tenures. The main proprietary tenures are : (a) *Single Zamindari* where there is one proprietor who after realizing the rent from his tenant cultivators pays his allotted share to the Government treasury ; (b) *Joint Zamindari* where an estate is held in common, the Government revenue and other liabilities being paid out of the rents after which the remainder is divided among the several partners according to their respective shares ; (c) *Pattidari* where all the land of an estate is divided and each holder gets his *patti* or share separately. The individual liabilities of the *pattidari* is regulated by their respective shares, as recorded, not as actually held ; (d) *Bhaiyachara* where all the land comprising an estate is held separately by more than one proprietor, the liabilities of the co-sharers being assessed on their actual areas possessed by each ; (e) *Imperfect Pattidari or bhaiyachara* where part of the land is held in common, part in severalty, and rents of the common lands go first towards the revenue and other liabilities. In such tenures where there is a case of joint ownership the Government revenue is paid through the *lambardars*.

(iii) *The Ryotwari Tenure.* This system is largely prevalent in Bombay, Madras, Burma and Assam and is conspicuous by its absence in the United Provinces. In this system, the State deals directly with each individual peasant and recognizes no middlemen as in the *zamindari* or *mahalwari* tenures, and the revenue which is assessed on each separate field according to its productive capacity is paid by the actual occupants of holdings.

But no account of land tenure in the United Provinces of Agra and Oudh will be complete without analyzing the different kinds of the cultivating tenures as contradistinguished from the proprietary tenures. It should be carefully borne in mind that under proprietary tenures

we have discussed the conditions on which the landlords have taken land from the Government while under cultivating tenures we study the terms and conditions on which the cultivator takes the land from the landlord for purposes of cultivation. We already know that in order to protect the interests of the tenant cultivators against landlords the Government by enacting several tenancy laws created a privileged class of cultivators giving them sub proprietary rights in the land.

The attention of the United Provinces' Government was attracted from an early period of its rule to the impoverished state of the tenantry which ultimately bore the whole burden of the rent, and with a view to alleviate this unwholesome feature, many legislative measures have been enacted. The Agra Tenancy Act of 1901 recognized five classes of privileged tenants (i) permanent tenure holders, (ii) fixed rate tenants (iii) ex proprietary tenants (iv) occupancy tenants and (v) non occupancy tenants. The first two classes of tenants, or sub proprietors as they are called are found only in the permanently settled areas of the Benares Division their rates of rent payable to the landlord were also fixed in perpetuity at the time of the permanent settlement. Their right is heritable and transferable, they can make permanent improvements on their property, mortgage and sell it. Ex proprietary tenants who were once proprietors of the land but have lost their right of ownership in land obtain by legal provisions cultivating rights in their *sau* (or home farm), and are entitled to hold it at a lower rate than the rate of the tenants for the same quality of land, in the same village. The right of these cultivating ex proprietors is heritable but not transferable. Occupancy tenants are those favoured tenant cultivators who acquire the right of fixity of tenure by continuously cultivating the same land for twelve years. Their right is heritable but not transferable except under certain conditions, the rent payable cannot be increased except by mutual agreement or by an order of the revenue court and that too only after a certain period of time. Non-occupancy tenants hold land without any rights. The Agra Tenancy Act of 1926, besides effecting a few other improvements, was mainly enacted to protect the tenants.

at-will who could, before the passing of the Act, be arbitrarily ejected by a notice at the close of any agricultural year. The object of the Act is to give *fixity of tenure* and *fair rents* to the tenants for effecting permanent improvements in the arts of cultivation. All those who were tenants-at-will at the commencement of the Act were granted statutory rights under which they became life tenants with a right to the heirs to hold the land for five years or up to the expiry of the lease, whichever was longer. This new class of tenants created by the recent legislation is known as the "Statutory tenants." The Act of 1926 also allows commutation of kind rents into cash ones. The rents of the statutory tenants are not liable to increase before the expiry of twenty years when the State will declare the new scale of rates, after conducting a thorough inquiry.

In Oudh, Act XXII of 1886 created statutory tenants who were given the right of holding the land for seven years at the same rent. In the last decade, the Oudh Rent Amendment Act of 1921 brought some notable changes in the rights of statutory tenants. Under this Act, every such tenant is entitled to receive a lease for ten years, and at the close of every such term to receive another similar lease provided that he agrees to any enhancement of rent claimed by his landlord, or, in case of dispute, ordered by the court. Special provisions have been made for the fixing of rent-rates to be used by the courts in determining fair rents. When a statutory tenant dies, his heir is entitled to retain the holding for a further period of five years, but is, thereafter, liable to ejection at the pleasure of his landlords.

U. P. Tenancy Act of 1939

The Act embodies the Government decisions as to the main points on which the land laws have been reformed in order to give relief to the cultivator and the peasant proprietor who are the backbone of our provinces and on whose security and welfare depends the future of a liberty-enjoying society and of a democratic system of government. We all think that the security of tenure for cultivators on payment of a reasonable amount of rent or of revenue, as the case may be, is the primary

requisite for an advance from the present conditions, and that, in order to remove the causes of poverty, the rich landlords here, as in other countries must be prepared to make some sacrifices

The Tenancy Act of 1939 replaces the Agra Tenancy Act of 1926 and the Oudh Rent Act of 1856. It introduces the following important reforms which are applicable to Agra as well as Oudh

1 All statutory tenants have been given the rights of a hereditary tenant. Hereditary rights have also been granted to the tenants who have so far been disqualified in Oudh from obtaining even the statutory rights

2 Under the Act, the landlord has the right of keeping not more than 50 acres of 'sir' land and every tenant who is a tenant of 'sir' land, at the commencement of the Act and who does not become a hereditary tenant, shall have the right to retain possession of his holding for a period of 5 years

3 New relations have been added to the table of heirs and it is necessary to prove the fact of co sharing for the purpose of inheritance

4 The Act gives to the land holder the right of exchange of land for consolidation of his holdings

5 The landlord cannot, except for building purposes and a garden for his enjoyment, acquire land for the purpose of farming

6 The tenant has been given the right to make any improvement, to erect any building and to plant trees in his holding

7 Taking of premiums or making some service a condition of tenancy is prohibited and if anybody contravenes the provisions of the Act with regard to these, he is to be penalized severely

8 Under the old Act it was a condition precedent that the Government was bound to allow remissions in revenue first before requiring the landlord to make remissions in rent but under the new Act, the Government has been empowered to remit or suspend rent without first decreasing or suspending revenues

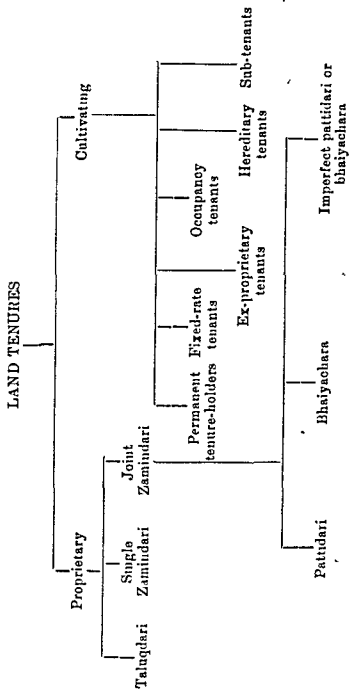
9. Many new provisions for the recovery of rent from the tenants and their ejectment have been added to give relief to both the parties and to facilitate the work of collecting rents from the tenants.

10. Under the Act, the tenant has got the right of getting suitable compensation for the various wrongful acts of the landlord. Such wrongful acts have been clearly specified in the Act.

Ideal System of Land Tenure

The ideal system of land tenure must give a permanent interest in land to the tillers of the soil. If the interest is temporary, he would exploit the land to yield the utmost at present without minding the fact that it would cause a permanent damage to land. There should not be any fear of unfair rents or insecurity of tenure. It should give a free and full incentive to the tenants to effect improvements in land and to enjoy its benefits. The Zamindari system falls short of the above ideal while the peasant proprietorship of the Punjab approaches the ideal to a very great extent.

Hereinafter is given a chart representing the different systems of land tenures as found in the United Provinces.



CHAPTER XXIII

WAGES

Wages Defined

Wages have been defined as "the price of labour hired and employed by an entrepreneur." The word 'wages' should be applied only to the remuneration for a particular kind of labour ; that is, for labour performed under certain clearly-defined conditions. We, therefore, exclude from the list of wage-earners all the independent producers and those professional people such as, doctors, lawyers because they do not sell their labour to an employer or entrepreneur but deal directly with the consumers and, secondly, because the economic laws which govern the rates of their remuneration are entirely different from those which regulate the wages of employees. In a big concern several grades of wage-earners from the organizer or the manager in a joint-stock company down to the unskilled workers with a long chain of intermediaries such as superintendents, inspectors, foremen, auditors, stenographers, accountants, clerks and the skilled workers, render their services either mentally or physically in the production of material wealth. Economists regard the remuneration of labour, whether manual or mental, skilled or unskilled, and whether it is paid weekly, monthly, quarterly or annually as wages and do not draw any difference between 'wages' and 'salaries' as the latter are determined exactly in the light of the same principles as the former ones.

In order to avoid confusion, we should also give another current definition of wages so often given by distinguished writers in their Economics treatises. The term 'wages' is used by them in a wider sense to denote the remuneration given to labour of all grades employed by others and also for the personal services put in by an entrepre-

in the real wages, if the difference in the general level of prices is a marked one. In big industrial towns and cities, owing to the general level of high prices, higher nominal wages have to be offered to the labourers. Sometimes employers indirectly try to increase the purchasing power of money of the labourers by starting co-operative stores and by giving other facilities to them. It should also be remembered that a rise or fall in the prices of commodities ordinarily consumed by the labourers will decrease or increase the real wages in spite of any change in the nominal wages of the labourers.

(ii) *Regularity or irregularity of employment.* In comparing real earnings, allowance must be made for the regularity or irregularity of employment in an occupation. In some occupations e.g., in building trade where the work is of casual and uncertain nature, the rate of nominal wages is somewhat higher than in those trades which though require similar strength and ability but give an assured employment throughout the year. Although the nominal wages are high, the real wages calculated over the whole year are low because the labourers have to remain unemployed for longer periods owing to the seasonal and uncertain nature of the work.

(iii) *Supplementary incomes.* In some localities or industries, labourers accept low nominal wages because they see the opportunities of getting their earnings supplemented by the additional employment of their children and wives. In some localities, e.g., in stone-quarries in Mirzapur, or in iron works at Kulti where there are no opportunities for the employment of child or female labour owing to the arduous nature of the work and the absence of other subsidiary occupations, the male worker commands slightly higher nominal wages because the whole burden of the maintenance of the family falls on his individual earnings but his real wages will probably be much lower if compared with a weaver in a cotton mill at Nagpur who receives low wages but manages to augment the aggregate income of the family by the earnings of the other members of the family.

(iv) *Cost of Training.* In estimating the real wages of the workers in different occupations allowance must be

made for all expenses incurred in the training, etc. To find out the real wages of a mechanical engineer we must make allowance for the training expenses whilst he attended the different institutions and other charges which are necessary to render him an up-to-date engineer.

(v) *Concessions incidental to the occupation* While reckoning the real wages of the workers in various occupations, account is taken in addition to the money wages of every other kind of concession, direct or indirect, incidental to the particular employment, e.g., the free lodging and other allowances, etc.

(vi) *The nature of the employment* In dangerous, disagreeable and unhealthy occupations (e.g., lead working, mining and heavy metal casting) which require excessive strain on mental and physical faculties, and involve greater liabilities of running into hazardous accident, etc., the real wages are low if compared with the rates of those occupations which are secure and healthy.

In a similar manner, the cleanliness, the pleasantness, and social standing of an occupation have to be taken into consideration while calculating the real value of the wages received.

(vii) *Prospects of success* Sometimes, persons do not mind accepting low wages in the initial stages of their employment if the prospects of security of service and promotion to higher grades of services are offered by the occupation.

The decision of a worker to undertake a particular job is governed more by the real wages than the nominal wages for his interest does not lie so much in the number of coins as in the number of his wants which are capable of being easily and conveniently satisfied.

The above factors also denote the causes of different rates of wages found in different occupations and at different places.

Methods of Wage Payment

There are two principal methods of paying wages. When wages of a labourer are paid by a unit of time—by the hour, day, week, month or year—irrespective of the work done, the system is called as the *Time wage* or

Time earning ; while when wages are paid per unit or piece of work completed by the labourer, the system is known as the *piece wage*. Although both the systems of remunerating labour are adopted suiting to the requirements of business or the nature of the work within the same industry, the time wage is the most widely used system in the modern industrial economy. The piece rate system is adopted in those industries where the work does not require a high degree of workmanship and is capable of accurate measurement, as in weaving, reaping crops, or in digging earth for embankments, etc. The time wage basis is found in those works which require a high degree of workmanship and admit of no easy measurement. Highly skilled and specialized forms of works are invariably paid by time. While estimating the merits of any wage system, the two essential tests must be clearly borne in mind. Firstly, the method of remuneration must be *fair* all round, "fair to the workers as a group, fair also to each one of them as a separate individual ; fair to the employers, and fair to the whole community as consumers." Secondly, it must be in consonance with progress and efficiency in industry.

Advantages and disadvantages of the time wage. This system has been favoured by workmen because it gives them a greater regularity and security of employment, safeguards them from over-pressure and strain, increases the quality of work done by the workers and diminishes the possibilities of unemployment. In contrast with these advantages, the general defect associated with the time wage system is that it tends to encourage slackness amongst the workers, as they are confident of their weekly or monthly remuneration irrespective of the work turned out. As a result of this, the overhead charges of the industry increase due to the additional expense incurred in the employment of overseers and foremen to watch over the activities and the quality of the work performed by the workers. Secondly, the relative efficiency of the different workers in the time wage system cannot be easily found out with the result that the more efficient workers stand to lose in such a bargain, unless strong supervision is maintained to keep an eye over the relative

output of the different workers with a view to remunerate them accordingly

Advantages and disadvantages of the piece wage The chief relieving feature of the piece wage system lies in the fact that it is fairer both to the workers and employers. Each worker is paid at the contracted rate per unit of his product, and is remunerated in proportion to his output, as a result of which the superior workers are offered an incentive to do their best by the prospect of a high rate of remuneration than the inferior workers. Again, under this system the workers can 'by a spurt of extra effort' manage to increase their earnings quite conveniently in order to meet any emergency. In short, the capital and labour forces of the industry are used more economically the total production is greatly stimulated, and the cost of supervision is reduced as the payments are made by 'result'.

On the contrary, this system carries certain grave defects. In the first place, it results in defective or "scamped" work, as the worker's eyes are fixed on the quantity and not on the quality of the work. In those occupations which require a high degree of workmanship this system is found to be most defective. Secondly, the workers by the temporary prospects of high earnings are apt to strain every nerve without taking due notice of the future consequences. This temptation to overwork or "speeding up" is a great evil, as it may lead to an early exhaustion of the productive capacities of wage-earners. Next, it eliminates the inferior workers and breeds a feeling of competitive rivalry among the workers. Lastly, the worker suffers a serious loss of remuneration at the time of sickness or accidents or of temporary stoppages of the work. In adopting this system of wage payment it should be the duty of the employers and the State as well to protect the workers from over exertion and "speeding up" which proves, at all estimates, too detrimental to the community.

How Wages are Determined ?

Several theories have been formulated to explain how the share of the social product that goes to labour is determined. The modern theory of wages, known as

the *Demand and Supply Theory of Wages* or the *Marginal Productivity Theory of Wages*, is admitted so far by most of the eminent economists to be the best explanation of wages. According to this theory, labour is likened to a commodity and like the price of a commodity, the price of labour, viz., wages, is determined by the relation between the demand for and supply of labour, subject to certain reservations. For a full understanding of the theory, a complete elucidation of the terms 'demand for labour' and 'supply of labour' seems needful.

The demand for labour closely resembles the demand for commodities in general. It arises from the service it renders in the production of wealth and depends partly, on the number of commodities turned out by it and partly, on the value of such commodities. Just as in the case of a commodity the consumer's maximum is determined by the utility he expects to derive from it, similarly the employer's maximum is determined by the productivity (i.e., amount of wealth produced) of labour. Manifestly, no employer can afford to pay more than the wealth produced by the worker. This explains why the remuneration of a skilful engineer is so handsome than that of an ordinary labourer whose contribution to production is much smaller if compared with the former. The demand for labour exists for various grades of labour and not for labour in general. Here, it may be remarked that an employer does not demand labour for its own sake but for the sake of profit that he would derive from the sale of commodities produced by the labourers and as such there is a limit to the number of workmen who can be profitably employed because, after a certain point, the employment of additional workers becomes unprofitable. So a stage is conceivable beyond which the employer will not think it worth while to engage any additional worker. In this way, the last worker the employer is prepared to employ is the 'marginal producer' and the contribution he makes to the production of a commodity is the 'marginal productivity' of labour engaged in that industry. He is just on the margin of being employed or dismissed. It may, therefore, be said that on the demand side the maximum limit beyond which rates of wages cannot be

paid for a certain grade of labour, is determined by its marginal productivity to the employer

To simplify what has been said above, let us take a concrete illustration. Suppose a firm by employing 50 workers is getting a net product of Rs 5,000 a year. On making calculations i.e., by finding out the market net value of the goods turned out by a labourer, if it is found out that the last labourer adds Rs 100 worth of product while he is paid Rs 80 as wages, then an advantage of Rs 20 may be said to accrue from the productive activity of the last worker to the employer. Guided by this monetary advantage he decides to employ more employees until he finds that the employment of the 55th worker gives him just that quantity of product (Rs 80) which is equivalent to the amount of wages (Rs 80) paid to him. Here, the last man employed (the 55th man) may be called the 'marginal labourer' and his contribution may be called the 'marginal productivity'. By hypothesis the workers in the same group are of equal efficiency and interchangeable with any other worker in the same grade and, therefore, the same wage must be paid throughout that grade. The wages of the grade, therefore, tend to be measured by the value of the product of the marginal labourer, or, to express the same idea in a scientific manner, *wages tend to equal the value of the marginal net product of labour*.

Let us now consider the supply side of labour. Labour like a commodity, has a cost of production, and an adequate supply cannot be had unless the remuneration of the workman is sufficient to cover the cost of his services. For any given class of workers, the cost of production means the standard of life, i.e., the amount of necessities, comforts and luxuries of life that the labourers are accustomed to enjoy. This standard of life varies with different groups of workers and fixes the *minimum* limit below which the rate of wages cannot fall, so long as the standard of living of that class remains the same. The 'cost of production' of labour, i.e., the cost of rearing and training workmen to enable them to reach a certain requisite standard of efficiency, plays an important part in the determination of wages. Wages which are insufficient to keep

up the standard of life of a worker and his family cannot indefinitely remain so. A greater tenacity in maintaining the established standard of life is shown among the higher grades of labourers who restrict the supply of labour by limiting the number of children in order to provide them with the same education, training and efficiency which they themselves have received. It is worthy of observation that standard of living, efficiency and wages are inter-related as they react upon each other. A rise in the standard of living means a greater efficiency which in its return leads to greater productivity and hence, to higher wages. Similarly, a fall in the standard of living either due to reductions in wages or to some other causes impairs efficiency of the workers leading to inefficient production and, therefore, to lower wages. The effect in both cases is cumulative. If workers are physically strong, technically trained, intellectually far advanced, financially better off and industrially better organized, their contribution to production is of greater value than the contribution of those who lack these advantages and opportunities; the former group of workers will insist on securing the whole of the marginal product as their remuneration, whereas, the remuneration of the latter group of workers owing to their disorganized state and financial weakness will just equal their standard of living. In view of these far-reaching consequences, labourers are very jealous of their standard of living and exert every nerve of theirs to live up to that standard. The supply of labour, and hence, the lower limit of wages is fixed by the standard of life of the workers.

By way of summing up, we may conclude that wages are determined by the relation between the demand for and supply of labour. The employer's maximum is determined by the contribution of the marginal labourer while the minimum is determined by the standard of life of the workers. "Between the lower limit set by the standard of subsistence or by the standard of life, and the upper limit set by the value of the labourer's contribution to the product, wages will fluctuate according to the relative bargaining strength of the two parties to the wage contract."

Some Peculiarities of Labour

In the foregoing discussion regarding the determination of wages under free conditions of competition and enterprise, we have treated labour as a commodity and the wages paid to labour as its price. The theory entirely ignores the human element and other important differences that exist between labour and commodities and, as such, the working of the theory must be modified to that extent. Prof. Marshall has pointed out that the following peculiarities in the demand for and supply of labour, must not be forgotten in the treatment of the theory of wages.

1 *The worker sells his work but he retains property in himself.* He cannot sell himself like a commodity or any material agent of production. Those who bear the expenses of rearing and educating labour, receive nothing of the price that is paid to the labourer as his wages. Consequently, the investment of capital in the rearing and early training of the workers is limited by the resources of parents, by their power of forecasting the future, and by their willingness to sacrifice themselves for the sake of their children. Unlike manufacturers who produce goods in the expectation of getting direct reward out of their invested capital and exertion undergone therein, parents invest money in the education and training of their children without any hope of direct remuneration. The evils that arise out of this peculiar situation are cumulative. They are specially noticeable among the poor and thoughtless parents who neglect the proper education and training of their children, either due to their weak financial circumstances or due to their selfish spirit or due to the lack of foresight, with this consequence that if once they become inefficient producers the effect continues in a cumulative way. In the higher grades of society, the children of artisans and of those educated classes which entertain a higher notion of duty towards their children, get a better start in life with greater chances of success in life than those of the workers whose parents are financially weak and uneducated. It is one of the chief causes of the immobility of labour from grade to grade.

2 *When a person sells his services, he has to present himself where they are delivered.* A labourer cannot be

separated from his work and so he must deliver himself personally on the spot. It is otherwise with the owners of land, capital and capital goods, who can sell their services abroad, and yet sit at home. Since the worker must be present, where his work is sold, it follows that mobility of labour and the mobility of the labourer are convertible terms. Therefore, the nature of the work, and associates, the agreeableness or otherwise of the place of work and the scale of remuneration are very important factors for the worker.

3. *Labour is the most perishable commodity.* If a labourer is out of employment for a day, its remuneration is lost for ever. A labourer cannot afford to wait for better prices (wages) as he cannot store his labour. The merchant, on the contrary, can withhold his commodities from the market if the prices are too low. This peculiarity forces the labourers to accept any rate of wages than to face unemployment and all its attendant miseries. There is, however, no cumulative effect of this peculiarity, unless during the period of unemployment the standard of living is so reduced as to affect his efficiency permanently.

4. *Labourers being poor and disunited are at a great disadvantage in their bargaining capacity as compared with the skilled employers.* Trade Unions help to bring about a balance of power between the two parties but their sphere of activities is mostly limited to skilled groups of workers. The union spirit is sadly lacking in the unskilled labourers, in whom it is most urgently needed. The unskilled labourers owing to the want of reserve funds with them and of the power of long withholding their labour from the market, often accede to the arbitrary terms of the moneyed employers. The effects of the labourer's drawback in bargaining are cumulative. As a result of a fall in wages, his efficiency as a worker will go down and, therefore, the normal value of his labour. These drawbacks of labour tend to decrease with the growth of strong labour unions, whereby, collective bargaining is substituted for individual bargaining.

5. The last peculiarity consists in the *slowness of the growth of new supplies of labour.* Unlike a commodity, the supply of which can be decreased or increased at will, the

supply of labour is comparatively fixed for a fairly long period as an adequate length of time is required for rearing and training labourers for a particular trade. The increased demand for labour in any industry may normally be met, either by an increase in the labour reared and trained for that industry, or by a movement of workers from other trades. The training of higher grades of labour specially depends upon the capacity of the workers' parents to forecast the future of such trades. The movement of labour from other grades depends on the degree of the mobility of the labourers from one grade to another. On the other hand, if the supply of labour is in excess of the demand adjustment cannot be brought about, unless the surplus goes permanently out of employment or dies out with the lapse of time. The supply of labour, therefore, cannot be quickly adjusted to demand.

Trade Unions

Trade unionism is the product of industrialism. With the growing industrialization and the consequent emergence of the proletariat, trade unionism came into existence to wipe out many of the disabilities which overtook the labouring classes helplessly in the beginning of and after the Industrial Revolution. Contrary to the current opinion that a trade union is a militant body always at daggers drawn with the employers, it must be pointed out at the outset that its primary object is to maintain and improve the conditions of the working life of the wage earners. A trade union has been defined as 'a continuous association of wage earners for the purpose of *maintaining* and *improving* the conditions of their employment'. At a later stage of their study, students will realize that trade unionism has been a great constructive movement which has played in many countries of the world a dominant part in the way of influencing legislation to combat the demoralising evils of child labour, excessive hours, and other inhuman, hideous and degrading conditions of industrial life.

The main objects of such associations are stated to be the following —

(i) to foster a spirit of brotherhood and a feeling of corporate existence or what is called '*esprit de corps*'

among the work-people ; to give them greater strength in the matter of bargaining with employers through 'collective bargaining' and to regulate the conditions of employment ;

(ii) to educate labour and to keep up wages to the marginal work of labour and to bring about a rise in wages by raising the standard of efficiency and workmanship ;

(iii) to collect funds for the relief of members when sick or in distress and provide out-of-work pay when members fail to secure employment, either through slackness of work or through strikes or lock-outs.

Trade Unionism in India

Trade unions in India have a short history. It was not until 1918 that labour began definitely to organize itself. The War created a new mass-awakening and the industrial workers became more and more conscious of their grave economic difficulties, particularly in matters of wages and working hours. Owing to the low wages, offered to the workmen, the unprecedented rise in prices, the high-profits reaped by the employers, and the degrading conditions of work, the condition of the industrial labour became too critical and the only remedy was sought in combination. From that year onwards there has been a more or less steady growth of trade unions, in spite of the inevitable fluctuations in their prosperity. The first Madras Labour Union was organized by Mr. B.P. Wadia ; from Madras the trade union movement spread to Bombay. In many of the manufacturing industries and other establishments trade unions were organized but many of them were in reality mere strike committees and died an early death in the years following 1920. The only stable unions which showed signs of permanence and vitality were of clerks, railway workers, postal employees and seamen. The trade union movement is also strong among the factory workers of Bombay and Ahmedabad.

The All-India Trade Union Congress was inaugurated in 1920 and since then it has been holding annual sessions in various centres. The main objects of the organization

were to coordinate the working of the individual trade unions and to recommend to the Government of India, workers' delegates for the International Labour Conferences. It became a central organization for the general guidance of the trade union movement in India, but from the very beginning it had a strong political bias. Its presidents and secretaries with the exceptions of a few persons have all been politicians first and labour leaders next.

As a result of the passing of the Indian Trade Unions Act in 1926, the movement has been placed on a more substantial footing. The Act grants immunity to all officials and members of a registered trade union from civil suits and criminal prosecutions in respect of and in the furtherance of its legitimate objects and they are not to be indicted for conspiracy. These privileges are not conferred on the unregistered unions.

Reasons for the Slow Progress in India

Considering the total labour force in India, the progress of the movement is very slow. The difficulties of organizing permanent trade unions on a stable basis may be enumerated as follows:

(a) The constant migration of wage-earners from village to town and town to village and from one mill to another, even in the same town, tends to diminish their interest in any organization. Indian labourers regard industrial life as a temporary expedient always cherishing the hope of returning and spending their final days in their native places.

(b) Illiteracy presents a serious obstacle in the way of regular organization. Being illiterate, they cannot appreciate the value of combination and the lack of genuine labour leaders can be explained to this drawback. In the absence of any internal collective will among the trade unionists, no stable organization can flourish.

(c) The extreme poverty is another bar in the way of permanent organization as even a minimum subscription is a sort of drain on the slender purses of the workers, particularly when they are already embarrassed by debt.

(d) Diversity of language and caste is a great hindrance in the way of combination and forming one strong organization.

(e) The opposition of an overbearing and selfish *sardar*—a jobber who occupies a very important place in an Indian factory as he recruits mill-hands and often lends money to them in the formation of effective trade unions—is a potent one as he would be deprived of the influence which he now wields in the present state of disorganized labour.

(f) Organization of labour is a much more difficult problem owing to the dominance of agricultural population in India.

(g) The hostile attitude of the employers also acts as a serious deterrent to the healthy growth of trade unionism.

In view of the fact that trade unionism is for those who are extremely weak and poor, all efforts must be directed to eliminate the above-mentioned drawbacks and strengthen the trade union movement as the industrial success of a country depends upon the industrial efficiency of its workers.

Mobility of Labour

By mobility of labour we understand the movement of workers with ease and promptitude (a) from one place to another, (b) from one profession to another, or (c) from one grade to another in the same trade or profession, in response to better inducements regarding the conditions of employment and remuneration. The first is called as the *geographical* or *place mobility* of labour; the second as the *horizontal* or *professional* mobility of labour, and the third as the *vertical mobility* of labour. The geographical mobility may be either permanent or temporary. Temporary flow of labour may be of the nature of movement of Government servants on transfer, or labourers moving to carry some seasonal occupation or trade, or merchants and tradesmen who repair to new and undeveloped areas only to come back to their homes after having amassed a fortune. Permanent migration may be either due to social or economic causes which

are very strong and count much in promoting the efficiency and productivity of labour

Immobility of labour means the state when the flow of labour from one place to another, or from one trade to another, is practically absent in response to higher wages and better inducements. The mobility of labour differs in different countries, different occupations and at different times within the same country and is governed to a very great extent by the spirit of enterprise, social customs, religious scruples of the people, and the extent of industrial progress achieved within a country

Mobility of Labour leads to Equality of Wages

The difference in wages in different places and industries may be ascribed due to immobility of labour. So the obvious remedy to bridge the glaring inequalities of wages is to seek ways and means of increasing the mobility of labour. Other things remaining the same, if efficiency of workers is the same and there is perfect mobility of labour from place to place, and from occupation to occupation, the wages of workers will tend to equality. Mobility of labour also promotes the efficiency of labourers in so far as it brings about the most rational distribution of labour force within a country

Hindrances to Mobility of Labour in India

The general immobility of the Indian population is ascribed to the following reasons —

(i) About three-fourths of the population consists of agricultural classes which are most immobile almost all the world over. Owing to their conservative and stay-at-home nature, to which Indian peasants are no exception, and the strange difficulties attendant upon their geographical mobility concerning the soil and climate of the place, the Indian cultivators generally stick to their ancestral holdings

(ii) Caste system which is a special feature of the Indian society also makes labour partially immobile, as it determines irrevocably the kind of profession which a man is to follow without the least deviation if he wants to enjoy the protection and goodwill of the

community into which he was ushered. Thus, the rigid rules of caste system are a giant obstacle in the way of horizontal mobility of labour in India.

(iii) As a result of the illiteracy and ignorance of the masses, they are seldom aware of the opportunities of employment. For the mobility of labour a correct knowledge of the place or professions where labour is in demand, is an essential condition. The obstacle to free movement of labour is further perpetuated owing to the lack of strong trade unions, (which usually make arrangements to collect and impart to their members information of vacant situations for employment) the complete absence of labour exchanges, and the want of State guidance.

(iv) Lack of adequate and cheap facilities of transport and communication and the consequent strange difficulties of the journey prevent an easy flow of labour. At the present day, however, the force of the argument is much weakened as the developments in the means of communication have been remarkable within a few decades but considering the extent of the country and poverty of the people they are held to be insufficient and expensive.

(v) Linguistic inconveniences, unfavourable geographical and climatic conditions, and the differing social customs of strange lands—all these factors combine to retard the free movement of labour. To work with men of different castes, professing different religions, speaking diverse languages and of widely differing customs is not, truly speaking, amenable to the taste of an average Indian labourer.

(vi) The Indian labourer is strongly tied to his native place, and his love for his family and associates proves sometimes too strong to be shaken off, even if he were offered better pecuniary advantages elsewhere.

(vii) The general poverty of the people is also a great obstacle in the way of free movement of labour. More often than not, the geographical mobility is handicapped because labourers for want of funds cannot move themselves with their family's belongings to those places where they expect better rewards.

(iii) Lastly, the want of a spirit of adventure, the general inertia setting upon the people, and the contented nature of an average Indian with the present state are also some of the important noticeable factors responsible for the immobility of Indian labour.

The Changing Environments

But from the above the readers should not run away with the idea that Indian population is completely immobile. The conditions are not the same as obtained half a century ago or so. Many of the above-mentioned causes have lost their importance, in face of the inroads of new Western ideas and the changed economic conditions. Caste system no longer holds its universal sway over the people who are changing their occupations in defiance of caste restrictions. Economic considerations are proving much stronger than the sentimental ties. Moreover, as a result of the introduction of improved facilities of transport and communication together with the opening of new avenues giving better employment by the development of large scale cotton, jute, coal, iron and tea industries, and the increasing pressure of population on land, labour is much more mobile today than what it was a few decades ago. In the initial stages of industrial development in India, many factories had to face severe difficulties due to the paucity of labour, but now all industrial centres are beginning to have a surplus of labour which shows that labour is tending to seek its proper channels. With the better and larger spread of general and technical education, with the gradual disappearance of religious scruples, social prejudices and caste restrictions, with the promise of improved economic conditions, and with the inculcation of the spirit of adventure and enterprise among the people, the time is not far to see when labour will be as fluid and mobile as it is found in any of the civilized countries of the world.

Influence of Social Customs

In India, as elsewhere in the world, custom has influenced man's life, actions and his economic relations to a very considerable degree. In civilized countries, custom is replaced by competition. But in India, though it is on the

wane, even now the actions of the majority are governed more often by custom than by free competition. The late Mr. Justice Ranade observed: "The family and the caste are more powerful than the individual in determining his position in life. Self-interest in the shape of the desire for wealth is not absent but it is not the principal motto. The pursuit of wealth is not the only ideal aimed at. There is neither the desire nor the aptitude for free and unlimited competition except within certain pre-determined groves or groups. Custom and State regulations are more powerful than competition and status more decisive in its influence than contract. Neither capital nor labour is mobile, enterprising and intelligent enough to shift from place to place. Wages and profit are not elastic and responsive to change of circumstances. Population follows its own law being cut down by disease and famine while production is almost stationary, the bumper harvest one year being needed to provide against the uncertainties of alternate bad seasons." Regarding the influence of custom, Mill points out that it is often the powerful protector of the weak against the strong and their sole protector where there are no laws or Government. But it also, on the contrary, tends to repress the individual, and to subordinate him to the community in a greater degree than is desirable. Competition helps to bring out the best in man.

The Caste System

The caste system is a peculiar institution in India and must be distinguished from the numerous social gradations obtainable in every country of the world. These latter are not divided into so many rigid and water-tight compartments, and there are no restrictions of any kind in the choice of occupations of an individual provided he possesses the requisite knowledge and training for doing that work. In India, on the contrary, the essential feature of the caste system is that birth "determines irrevocably the whole course of a man's social and domestic relations and he must live, eat, drink, dress, marry, and give in marriage in accordance with the usage of the community in which he was born." Castes are divided into three main types, the functional, the racial, and the sectarian. The most important of these are the functional

castes, representing the various occupations that were followed by a group of persons in earlier times

Undoubtedly, the caste system based as it was originally on economic division of functions, has promoted professional skill and dexterity and helped to preserve the various arts and industries of the country. Dexterity once acquired was handed down from father to son as the former always taught the latter his trade secrets more willingly and carefully than any other tutor. It also fostered the spirit of brotherhood among members of the same caste and gave protection to the weaker members of the community. Again, the institution of caste, as the biological studies inform us, has prevented the deterioration of the higher races and maintained the integrity of the Hindu Society by preserving the physical heredity of the people because the system definitely sets itself against any intermarriage with the inferiors.

Whatever advantages might have been conferred by the caste system in days gone by, under modern changed conditions of production and distribution the rigidity of the system is a great obstacle to the free working of the economic forces of competition and to the full attainment of the economic efficiency of our labouring classes. It prevents the free flow of labour from profession to profession with the result that certain occupations are overcrowded while others starve owing to paucity of labour. This limitation of competition leads to inequality of wages in different occupations to the great detriment of the total national productivity. The system also acts as a bar to the progress of large scale enterprise due to the lack of speedy adjustment between demand for and supply of a particular kind of labour. Large scale production requires the co-operation of different factors of production which is conspicuous by its absence due to the presence of the feeling of class hatred against one another. The caste system does not recognize dignity of labour and is antagonistic to the principle of equality. It has degenerated into an engine of social oppression. The depressed classes are subjected to barbarous humiliation and to many disabilities not only social but economic. The barriers of caste, however, are breaking down day by day in conse-

created by the Western civilization, culture and ideals. The intensification of the struggle for existence is another contributory cause in the dissolution of the joint family system. The system from the economic point of view has certain very objectionable points. It encourages indolence and stifles all energy for, when the barest means of subsistence are guaranteed to every member, some of them are apt to lose the incentive to work. Consequently, parasites begin to flourish in every family and bring about its breakdown. Again, the system acts as a deterrent to the accumulation of capital as the earning of an individual is distributed among all the members of the family. Further, it checks the free mobility of labour as the family affection binds them to their native places and if they shift to some outside place in order to improve their economic strength they invariably cherish the hope of returning to their homes. Although the advantages are overborne by the defects considered from the economic point of view, the rank individualism of the West which is a negation of social harmony should not be allowed to have a full play in India.

WAGES IN INDIA

"The great bulk of the labouring class in India are men who work on their own account and not for an employer. The rate of wages which appears to be the paramount question to the vast majority of the people of civilized lands, is a matter of very high concern to the working class of India." The remuneration for services rendered in the rural areas is governed by customs. The labourers receive their wages in kind at the harvest time and remain unaffected by a rise or fall of prices. A labourer prefers a low rate of wages in his own village instead of taking advantage of high wages prevailing in cities, but now he is undergoing a silent transformation due to the fact that prejudices and conservatism are disappearing and a new demand for labour is being created by the modern industrial concerns due to the activity of the war industries. Money economy is replacing the old customary payments for services made in kind. The rate of wages is also rising slowly with the increase in the efficiency of the labouring classes. The improvement of public health,

eradication of diseases, general welfare arrangements, the various Acts passed by the State to safeguard the interests of the labouring classes and the activities of the International Labour Organization, will improve the lot and earnings of the labouring classes in India. People have realized that cheap labour is really a dear labour.

Average daily or monthly earnings of workers in India

Occupations	Usual period of payment	Rate in cities	Rate in towns and villages	
		Rs	Rs	
Mistries	Monthly	40 to 60	30 to 35	
Steam Engine Drivers		40 to 50	25 to 40	
Motor Drivers		30 to 40	20 to 25	
Firemen		20 to 25	15 to 18	
Proof readers		40 to 75		
Compositors		30 to 35		
Weavers	Daily	1 4 0	0 12 0	
Spinners		0 14 0	0 10 0	
Coal miners		0 12 0		
Coolies in Tea plantations				
(a) Men		0 5 6		
(b) Women		0 3 0		
(c) Children		0 1 0		
Masons		1 4 0	0 12 0	
Bhisties		0 12 0	0 6 0	
Carpenters		1 4 0	0 12 0	Or 24 seers of gram per plough per cultivator
Blacksmiths		1 4 0	0 12 0	As above.
Domestic servants		0 6 6	0 4 6	Or a fixed quantity of grain at the time of harvest
Semi skilled workers		0 12 0	0 9 0	
Unskilled workers				
(a) Men		0 6 6	0 4 6	
(b) Women		0 4 6	0 3 0	
(c) Children		0 3 0	0 2 0	
Barbers		0 12 0	0 8 0	6 seers per adult member per year.
Washerman		1 0 0	0 9 0	" "
Cobblers		1 4 0	0 10 0	" "
Village Teacher	Monthly		18 0 0	

CHAPTER XXIV

INTEREST

The Definition of Interest

Interest is generally defined as the price paid for the services of capital in the field of production. Prof. Carver defines it as "the income which capital returns to its owner whether he lends it or employs it himself in his own business." From the point of view of distribution, "it is the share of income that is assigned to capital goods, or more accurately to the owners of such goods for the part those goods play in production."

But these definitions are only one-sided, as they take into account only the productivity of capital and the idea of sacrifice or abstinence in the postponement of an enjoyment on the part of those who save and lend is wholly neglected. In order to arrive at a true definition, we must view it from two sides—the side of the borrower, and that of the lender. Looking at it from the side of the borrowers it may be affirmed that capital is required because it is productive and serviceable to the community which in order to utilize these services for its own benefit is prepared to give interest. Capital can only be produced by saving which often needs certain sacrifices or waitings on the part of the people who postpone their present pleasures for the future and thus, bring capital into existence. In order to secure the control of this capital some inducement or reward must be offered to the capitalists. In order to explain interest both from the points of view of borrowers and lenders, it is defined as the price for the productivity or services of capital, paid to the capitalist for his waiting or abstinence which he has undergone in order to save it.

Gross and Net Interest

The term "interest" carries with it different shades of meaning. What we call in our everyday life as interest is in reality "gross interest" which is different from what we call in Economics as "net interest". Gross interest is much wider in scope than the net interest and is composed of the various elements including net interest, the former varies from country to country, from place to place, from man to man at one and the same time, the latter is (taking the complete mobility of capital for granted) the same at all places and with all the persons at one and the same time. The main cause for the variation in the gross interest is the absence or presence of the various elements at different places and with different individuals. The following are the various elements—the different charges paid in the form of interest—that go to make up the gross interest —

1 *The reward for waiting or net or pure interest* This portion of the gross interest which is a payment for the use of capital without any allowance for risk or any other factor is termed as pure or net interest, all other charges are the prices exacted for the services rendered by the capitalist to the debtors. Whenever gross interest and net interest tend to coincide or there is a very small margin of difference between the two it must automatically be assumed that this is "a payment for the loan of capital when no risk, no inconvenience and no work are entailed upon the capitalist because of the loan."

2 *Insurance against risk of loss* Every act of lending involves some sort of risk because of futurity which is so uncertain. An extra insurance premium over and above the net interest is made by the lender to cover any risk of loss which may arise due to any business contingency or due to some flaw in the character or business morality of the borrower. The risks to which a lender is exposed may be classified under two separate heads —

(a) *Trade risks* The investment in a modern industry is generally subject to great risks because its success depends largely upon speculation. Forward

buying and selling, production for future consumption and for foreign and uncertain markets are everyday feature of a modern industry and a kind of necessity. All these entail grave risks which must be insured by the capitalists in the form of high interest charges.

(b) *Personal risks.* The personal risks vary greatly in different cases, according to the character or the business morality of the individual borrower. Ordinarily, a borrower possessing a secure credit can obtain a loan of capital at cheaper rates of interest than that person who is noted for his dishonesty and recalcitrancy in the repayment of his loans. The capitalist, on economic considerations, charges in the latter's case a high rate of interest to insure himself against possible losses.

3. *The earnings of management.* Certain kinds of investments require a good deal of management—administrative, legal and executive—which necessitates a great amount of botheration and trouble on the part of the lender. For this extra amount of trouble which he has to undergo in the form of keeping and maintaining the accounts of incomings and outgoings of his borrowers, he charges an additional remuneration in the shape of a higher gross interest, and what appears to the borrower as interest, is, in fact, from the point of view of the lender, earnings of management of a troublesome business, e.g., the *qist* system which demands a complete machinery for the distribution of the *qists* and the realization of the monthly instalments. The greater the inconvenience experienced in the realization of principal and interest, the higher will be the gross interest charged on that particular kind of loaning. Thus, the gross interest may be much higher than the pure or net interest or may sometimes coincide with the latter. Some or all of the above-mentioned payments when combined are termed as *gross interest*.

The Problem of Interest

Closely allied with the question of "interest" are the various problems which require a clear exposition and some brief explanations. They are as follows:—

1. Should interest be paid?

2 Why is interest paid?

3. How is the rate of interest determined?

We shall discuss these problems seriatim under separate heads

Should Interest be Paid?

The problem whether interest be paid or not has been a much debatable question for many centuries. The ancients denied absolutely the justifiability of taking interest. The Law of Moses among the Jews condemned interest, Plato forbade the taking of interest. Aristotle regarded interest as unnatural because he thought that money was "barren." The Laws of Islam forbid the taking of interest. The main cause of this trend of thought is to be found in the fact that in those times capital was borrowed not for productive but for consumption purposes. In those early days when there was little employment of capital for productive purposes, it was the poor and the needy who stood in need of credit for the satisfaction of his elementary wants and to tide over the period of distress and calamity and, therefore, the prohibition against interest-taking was considered justifiable on moral and ethical grounds. It was under these peculiar situations that the educated and enlightened opinion of the time waged a continuous war against the taking of interest.

But the contemporary Hindu opinion was different and the taking of interest was not prohibited altogether. The Laws of Manu gave their sanction in this respect and since the profession of money-lending is carried on in India from times immemorial and the community of money-lenders is not considered a disrespectable one, it can be safely concluded that the importance of taking interest and its justification was fully realized by the people of the country. The reasons for this solitary exception are not far to seek. India has been one of the most leading commercial and industrial countries of the world from a very early period of human history, and as such, industry and commerce always sought the services rendered by the community of money-lenders. The importance of investment for productive purposes was

clearly realized by the Indians at a very early stage and, that is why, the taking of interest in India was not looked upon as a "deadly sin" as in other countries of the world.

With the improvement in the means of communications and knowledge together with the new inventions, the development of trade, commerce and industry and increasing demand for capital for productive investments, there appeared a gradual change in the opinions of men regarding the payment of interest. In the course of time, the demand for capital for productive purposes began to occupy the foremost position among the borrowings in comparison to the demand for purposes of consumption. Money is now mostly borrowed for productive purposes with the aid of which fresh wealth is created and the borrowers give something out of this wealth to their creditors. Modern opinion, therefore, has brushed aside the old idea against the non-payment of interest.

Why is Interest Paid ?—A Reward for Service

While defining interest we pointed out that from the point of view of the borrower, interest is the remuneration for the use of capital ; it is a reward for the services rendered in production by capital. Interest is paid on capital because it gives a necessary service to the producer in the shape of increased production of goods and because this service would not be forthcoming unless a reward were paid for it

In modern times, the greater portion of the borrowings are effected for the productive purposes and generally the modern borrower is a great business magnate. With the help of his borrowings which represent his capital in the form of capital goods such as tools, machinery, buildings, plants and raw materials, he secures through the economies of large-scale production a considerable increase of output at a smaller cost per unit. Out of this increased product, the debtor is enabled to pay something in return for the services rendered by capital. But at times it becomes a very difficult task to draw any fine distinction between the loans for industrial and consumption purposes, therefore, interest is justifiable in all the

cases Further, loans for consumption purposes would not be forthcoming if interest were not paid on them

How is the Rate of Interest Determined ?

Various attempts have been made from time to time to explain the nature of interest and how the rate of interest is determined The most noteworthy and important theory that has influenced the economic thought for a considerably long period is the "Productivity Theory" of interest evolved by Malthus, Say, Carey, etc., which seeks to establish that interest is a price paid for *productive* services of capital, the "Abstinence Theory" propounded by Senior justifies interest on the ground that it is a reward for *abstaining* from the immediate consumption of wealth the "Exploitation Theory" put forward by Karl Marx and Rodbertus tends to prove that interest arises from *exploitation*, from depriving the workmen of their legitimate portion of the total wealth produced by them A fuller treatment of these theories may be read from some of the bigger treatises on Economics For our purposes it is sufficient to remark that these different theories have been only partially true in the study of the determination of the rate of interest Every theory seems to start with a particular aim in view and attach a special bearing either on the demand side or the supply side of the problem

The latest and widely current theory is the "Demand and Supply Theory of Interest" According to this theory the rate of interest depends on the demand for and supply of capital and is fixed by the interaction of the forces which influence the borrowers and lenders at a particular time in a particular business or trade Like the value of other commodities, the rate of interest is determined by the equilibrium of the demand for and supply of capital Prof Marshall writes that interest being the price paid for the use of capital in any market, tends towards a level at which the aggregate demand for that capital in that market, at that rate of interest, is equal to the aggregate supply of capital forthcoming there at that rate

The Demand for Capital The demand for capital depends on the "productivity" of capital, always remem-

bering, of course, that when we speak of the productivity of capital we mean the joint productivity of capital and labour. "Capital is demanded" as Penson states, "because there is an advantage to be gained from its employment." The demand comes mainly from those who wish to employ that capital with advantage or with anticipated advantage to themselves, e.g., from traders and manufacturers, private individuals and business people from the local authorities and the State itself. The combination of all the various forms of demand including the demand for consumption purposes makes up the *aggregate Demand for Capital*. It is a point to be borne in mind that every factor of production, in a productive undertaking, is employed up to the extent it is advantageous or profitable to the entrepreneur. The demand for capital, like other commodities and services, depends on its utility and productivity to the borrower. This productivity of capital fixes the maximum price which a borrower is willing to pay rather than go without the services rendered by capital.

The Supply of Capital. The accumulation or supply of capital, as previously discussed, depends upon the power and the will to save together with the opportunities available for investment in a particular country. To repeat, in the words of Marshall, the supply of capital is governed by a great variety of causes (*i*) custom, (*ii*) habits of self-control and realizing the future, (*iii*) the power of family affection, (*iv*) security of life and property, (*v*) progress of knowledge and intelligence, (*vi*) facilities for the investment of capital, and above all (*vii*) the rate of interest. The rate of interest has a commanding influence on the accumulation of capital though it must be noted that people will save even if the rate of interest is zero in order to make provision for a rainy day and old age. But in view of the fact that the creation of capital involves the postponement of present consumption of wealth and is attended with some sacrifice of 'waiting,' an adequate inducement in the form of the rate of interest has to be offered to attract a requisite fund of capital for the diverse requirements of the community. Different rates of interest will influence the savers in a

variety of ways, many of whom will be willing to put forth their supply of capital at a lower rate of interest. Under such conditions, the rate of interest is determined by the reward or rate of return required to induce the 'marginal saver' to bring forth his supply of capital demanded in an industry. The supply of capital is also governed by the rate of interest. The higher the rate of interest the greater is the amount of saving and capital, the lower the rate of interest, the smaller is the amount of saving and capital.

The Rate of Interest Having analysed the conditions of demand for and supply of capital, let us now try to understand how they act upon one another in the determination of the rate of net interest which practically involves no element of risk, nor any trouble of management and collection in the realization of the invested amount of money.

DEMAND Amount of capital that would be borrowed	Rate of interest	SUPPLY Amount of capital that would be lent
Rs		Rs
1,00,000	5 per cent	10,00,000
2,00,000	4½ "	8 00 000
3,00,000	4 "	6,00,000
5,00,000	3½ "	5,00,000
8,00,000	3 "	2 00,000
10 00,000	2 "	1,00,000

If the rate of interest be 4 per cent the demand would amount to Rs. 3,00,000 and the supply would be equal to Rs. 6,00,000. In this case, the supply being greater than the demand, the more eager lenders would be willing to lend at a lower rate of interest. On the contrary, if the rate were 3 per cent the demand would be for Rs. 8,00,000 and the supply would shrink to Rs. 2,00,000. In this case, demand being greater than supply,

the more eager borrowers would be willing to pay a higher rate of interest. The rate of interest would settle between 4 and 3 per cent. In accordance with our given schedule, the rate at which there would be an equilibrium between demand and supply is $3\frac{1}{2}$ per cent. a rate at which equal quantities of capital, viz., Rs. 5,00,000 are demanded and supplied, and at which point the marginal productivity of capital, as measured in money, will tend to equalize the sacrifices of the marginal saver.

Different Rates of Interest

In the foregoing section, we have examined the factors working in the determination of interest rates and perceived that this pure or net interests—the price of capital—is determined, like the prices of all other commodities and services, by the interaction of demand for and supply of capital. Hence, there should be one single rate prevailing at a particular time. But in the business world we notice remarkable variations in the rates of interest charged by money-lenders, pawn-brokers, private merchants and capitalists, banking institutions and the public authorities from their respective customers. The interest rates generally vary from 3 per cent. to 7, 9, 12, 25, 75 (one anna per month on every rupee borrowed) per cent. How such astounding differences can be accounted for? The reason for this variation is to be found in the fact that what a layman takes to be interest, is 'gross interest' as distinguished from 'net interest.' Gross interest, as we have explained, includes beside the payment for the use of capital, other charges of insurance against risk and expenses of management in respect of the loan advanced to the borrower. The 'gross interest' varies from industry to industry and from individual to individual due to the varying degrees of risk and trouble of management and collection involved in an investment. Net interest tends to remain the same at a particular period of time. The rates of interest shall have a tendency to remain high so long as the security is wanting and the business morality is not fully developed. It is for this reason that in backward and uncivilized countries, where the means of subsistence are insufficient and the conditions of life and property unstable, the

rates of interest are generally higher than in the civilized ones

Again, different rates of interest are found prevailing in different countries because of the immobility of capital to foreign countries. The disinclination of an investor to place his capital in foreign investments brings about wide differences in the local rates of interest. The "disinclination of capital to emigrate" can be ascribed to the hesitation of investors who do not like to lead in foreign countries because they feel that the foreign administration may not be fair and sympathetic in respect of credit claims, etc. Secondly, the apprehension of an international war which might lead to a suspension of interest payments, if not forfeiture of the entire invested capital, forbids lenders to send their supply of capital even if the rates are somewhat more remunerative. These causes in addition to the causes already examined above may operate to create differences in the rates of interest in different countries.

The Tendency of the Rate of Interest to Fall

An intelligent study of the rate of interest and its examination by the economists has shown them that there has been a noteworthy tendency, with the economic and social progress of society, for the rate of interest to decline. In spite of the continuous demand for new capital for the expansion and maintenance of industrial equipment and commercial requirement, in spite of our extended use of wealth in unproductive consumption for the satisfaction of comforts and luxuries in all their new varieties, and in spite of the periodic destruction of capital supplies or the temporary stoppage in the course of accumulation in war time and other periods of disorder or natural calamity, wealth in all its various forms tends strongly and continually to increase. This increase in wealth brings about an increased accumulation of capital as a result of which the marginal utility of capital to the borrowers decreases and so also the rate of interest.

It has been maintained by a few economists that in the course of time there is every possibility of *the rate of interest falling to zero*. In pure theory such a state is

conceivable when the rate of interest with the ever-increasing supply of capital may continue to decline until it falls to zero. But the actual conditions of the industrial and business world point out the inaccuracy and inexactitude of such a statement. Firstly, when the rate of interest is zero the marginal savers, who are induced to save chiefly by the inducement or reward offered to them in the shape of interest, will spend their surplus income in the present gratification of their wants and those who will save will tend to hoard it or spend it more lavishly in the immediate pleasures of self-indulgence as a result of which the total supply of capital will be diminished and fall short of the demand. Secondly, every investment does involve some risk, inconvenience and expense and, therefore, interest must persist. As a matter of fact the entire structure of modern industrial organization is far more hazardous than it has ever been so. Thirdly, the destruction of wealth that usually takes place either through war, flood, conflagration or some other freak of nature requires to be repaired as a result of which fresh demand for capital is created. Again, an increase of population, new inventions involving expensive machinery, reclamation of new and waste lands, new modes of living are all continually creating the demand for capital to a considerable degree. All the above-mentioned factors prevent the rate of interest or the marginal productivity of capital from falling to zero and, therefore, there is no likelihood of the rate of interest ever falling to zero.

Interest and Rent

Interest is a payment for the use of capital; rent is the income derived from the ownership of land and other free gifts of nature. As such both the incomes can be said to be accruing from 'material aids' to production. During short periods there is a great resemblance between interest and rent because in the short period the supply of capital goods, like the supply of land, is inelastic and cannot be immediately increased in response to an increased demand for them. That is why the returns on capital goods whose supply is limited, though for a temporary period, have been termed as *quasi-rent*—as if they were in the

nature of rent. But in the long period the resemblance ceases to operate because, unlike the supply of land, the supply of capital goods can be increased positively to equate the enhanced demand for it. It is this closer affinity between interest and rent which has led Prof. Marshall to state that "rent, quasi rent and interest are three species of the same genus."

Land is a free gift of nature its supply being inelastic capital is a product of human labour and can be increased considerably with a rise in demand for it. In this respect interest differs essentially from rent. The latter tends to rise with the progress of society and the increase of population while the former tends to fall under the same conditions. Further, the rate of net interest tends to equality whereas rent differs considerably due to the relative advantages of fertility or of situation or both possessed by a land over the least productive one. Again, the amount of rent is determined by the existence of no-rent land from which is measured upwards the surplus of produce of the lands bearing rent but in the case of capital we do not find any no-interest capital for all portions of capital bear the same interest. Then, again, rent does not enter into the price of agricultural produce either on the extensive margin or on the intensive margin, whereas interest does so and plays an important role in the cost of production.

In many cases land and capital are found mingled together and, therefore, the distinction between rent and interest is not very apparent and clearly discernible. For example, the capital that has been permanently invested in land for effecting improvements in its productivity becomes indistinguishable from the natural and permanent conditions of land and gets so assimilated to it that the entire return is taken to be rent which, from the point of view of economic theory, consists of interest proper and rent. Again, the rent of buildings is made up of two elements, viz., interest on capital invested in the construction, repairs and renewal of the buildings and rent arising out of the use of land upon which the building is raised and any situational advantage possessed by that plot of land.

would tend to equalize all over the country, but when the rates of interest vary from one place to another and from one industry to another it indicates that perfect mobility of capital is not possible within the range of practical life.

Mobility of capital depends upon the form it assumes. Circulating capital is more mobile than fixed capital. Liquid capital, on a slight inducement of a higher rate of interest in some particular industry, can readily be invested. The holders of shares can sell away their shares and transfer them but it is otherwise with the fixed capital. Capital once sunk in buildings, tools, machinery, etc., peculiar to an industry cannot be transferred even if there were greater prospects of returns unless their full value has been realized.

Security of investment or absence of risks from any loss is a necessary concomitant of mobility of capital. Most of the investors prefer a safe investment of their capital at a lower rate of interest and abstain from hazardous and uncertain businesses with prospects of a higher rate of interest. Again, it depends upon the industrial and commercial progress achieved by a country. In an agricultural country, the movement of capital is not so rapid as it is found in an industrialized country, because of the large requirements of capital for the various productive concerns. The rapid means of communication such as telephone, telegraph and radio, the banking institutions, and the share of stock markets are further important agencies that tend to promote the mobility of capital. Lastly, the political stability and peaceful atmosphere of the country is greatly conducive to an easy flow of capital from one part of the country to another for purposes of productive employment.

Mobility and Supply of Capital as found in India. It is an admitted fact that without an adequate supply of capital and its free flow into productive channels no country can aspire to achieve industrial and commercial development and economic salvation. The modern processes of production require a colossal fund of capital which, in the absence of a proper feeding, would starve, decay

is becoming more mobile as is represented by an increase in the number of banks with their increasing deposits, but it has flown into well-trying and well-beaten channels only, e.g., cotton, leather, silk, paper, sugar, flour-milling, cotton ginning and paddy-husking industries, where it has sometimes even resulted in over-investment. Security of investment is an essential condition in the mobilization of capital resources specially for those who are passing through a transitional stage of modern banking and industrial economy. The recent investments made in iron works, cement concerns, cigarette factories, hydro-electric installations, and, above all, sugar mills in the United Provinces, just after the protection granted by the Government, bear a strong testimony to the fact that Indian capital is no longer shy and timid. The ready response of the investing public to the Government rupee loans floated now and then, the huge deposits and cash certificates of the postal savings banks, the increasing business of Life Insurance Companies, the shares issued by the Reserve Bank of India, amply prove the validity of the aforesaid statement. Many of the big industrial enterprises and commercial concerns are now financed by Indian capital and it is expected that with increasing facilities of banking specially of industrial finance, much of the potential capital that now lies deep buried unproductively will come out for industrial, agricultural and commercial developments.

Our Need

Banking facilities are thoroughly inadequate for tapping the entire resources of the country and for mobilizing them into capital resources for her industrial development. There are numerous urban places of considerable commercial importance which are not served by any banking agency ; while rural areas are totally bankrupt of banking facilities, and cultivators know not the name of investment. In order to mobilize the meagre savings of the cultivators, landowners and petty traders, the establishment of co-operative institutions and postal savings banks at an early date seems to be an urgent need of the rural areas.

Industrial banking facilities of a specialized character, as found in the Western countries or in Japan, are conspicuous by their absence in India. In our country, capital for industrial development is not easily forthcoming from the public. This immobility of capital is due to a variety of causes. Firstly, there is no recognized method in India by which the general public can obtain information, advice or assistance as regards industrial investments. Secondly, the failure or lack of success of many of the industries started in India has shaken the confidence of the public in industrial investments to a certain extent. Lastly, the fiscal policy of the Government which does not guarantee protection against foreign competition seems to be a powerful check to the free flow of capital to new and less popular channels of production. In view of these drawbacks and deficiencies found associated with the industrial finance in India, the Central Banking Inquiry Committee have recommended the establishment of a "Provincial Industrial Corporation" for every province, with branches, if necessary, and with capital initially or permanently supplied by the Provincial Governments. Their establishment in the various provinces is anxiously awaited.

CHAPTER XXV

RURAL INDEBTEDNESS IN INDIA

It is necessary to inquire into the causes of rural indebtedness which proves a great stumbling-block in every scheme of rural reconstruction. The condition of the Indian cultivators is at once miserable. Their poverty is appalling, their indebtedness is inextricable, and their income is ridiculously insignificant. Writing about the indebtedness of the cultivators, the Royal Agricultural Commission stated : "No one, we trust, desires to witness a continuation of a system under which people are born in debt, live in debt and die in debt, passing on their burden to those who follow. That there are large numbers of hopelessly insolvent debtors in rural areas is generally admitted and we cannot regard it as making for health in the body politic that they should be allowed to remain without hope and without help." Various estimates that have been made to find out the extent of the agrarian indebtedness go to show that the problem has assumed alarming dimensions. Recently the Provincial Banking Inquiry Committees have estimated the rural indebtedness amounting to over Rs. 900 crores and the worst feature of it is that it has been distinctly on the increase. It is said that 56 to 78 per cent. of the cultivators are involved in debt and most of it is secured by mortgage of land.

Causes of Rural Indebtedness

So many factors have combined to bring about this important problem of rural indebtedness that it becomes difficult to separate the cause from the effect. Controversy may arise whether or not a certain factor is the cause or the effect of rural indebtedness. Nevertheless, a brief attempt will be made in the following pages to point out the few important causes which have conspired to bring this dire situation before our country.

(i) One of the primary reasons of the chronic indebtedness is to be found in the fact that agriculture as a profession has ceased to be a paying one in the country where about 73 per cent of the population depend directly upon it. Owing to the heavy annual interest charges, the excessive pressure of the population on land, resulting in minute sub-division, and uneconomic fragmentation of holdings, the loss of industrial and subsidiary occupations due to a large influx of cheap machine-made goods from abroad, the loss resulting from unorganized marketing of the agricultural products, the cultivator is not making any profits from his land. He is engaged in agriculture not for a net return but for subsistence and because he cannot find profitable investment of his labour elsewhere. The production from land is not enough to satisfy his needs which force him to fall in debt from which extrication becomes difficult in spite of his patient and hard toil on fields and the most frugal ways of living.

(ii) *The insecurity of harvests* The country is subject to frequent failures of rains and the resultant famines. Agriculture is a gamble in rain. In every five years, it is estimated there is one good year, one bad year and three indifferent years from the point of view of rainfall. Occasional ravages of famines with all their severity cause endless miseries to millions and break the backbone of the peasantry, and the cultivator, having no reserve to fall back upon in times of distress, easily falls into the clutches of a money-lender. Failures of harvest, due to drought or floods, conflagration, the uncontrollable swarms of locusts, hail or storm, force even the thrifty to fall into hands of a money lender.

(iii) *The loss of cattle due to famine and disease* Owing to frequent failures of the Monsoon resulting in a scarcity of fodder and water, many cattle die of starvation. The sudden loss of cattle due to diseases like rinderpest affects the cultivator adversely and necessarily sends him to the money-lender, in the absence of any cattle insurance scheme from which he may recoup his losses.

(iv) *The excessive litigation* Disputes about land and money dealings and other petty points are a potent cause of the ruin of the cultivator. The multiplication of

pleaders, as a result of the extinction of the village Panchayats, has created a situation altogether different. The old village harmony and co-operative instinct is superseded by feud and factionousness. The effect of heavy expenditure and time upon the slender purse of the cultivator for purchasing justice in the Courts of Law can easily be imagined.

(v) *The money-lender and the provision of credit.* Agriculture requires credit all the world over, to which India is no exception; the agriculturists realize their income only at harvest times while the expenditure is distributed over all the twelvemonths. In rural areas, there are no banking facilities to finance agriculturists for carrying on their farming operations, as are to be obtained in the cities. The provision of credit for the poor agriculturists, under the present stage of rural credit organization, is made by the village *mahajan* who by taking advantage of the tenant's rank ignorance and dire necessity charges unscrupulously high rates of interest. A well-known author in pointing out the evil effect of usury states: It is usury—"the rankest, most extortionate, most merciless usury—which eats the marrow out of the bones of the ryot and condemns him to a life of penury and slavery, in which not only is economic production hopeless, but in which also energy and will become paralysed and man sinks down beaten into a state of resigned fatalism from which hope is shut out and in which life drags on wearily and unprofitably as if with no object in view." In the absence of any other better system of credit organization, the village money-lender plays a useful part in the rural economy but the price exacted for the services rendered to the cultivator is too extortionate and his rapacious habits to defraud and inveigle him into his vicious net by divesting him of his property are too questionable.

(vi) *The extravagance of the cultivator.* Apparently, it seems a big contradiction to stigmatize the Indian cultivator as extravagant in his expenditure; he works under semi-starvation and goes half-naked. In spite of his being a most frugal and abstemious sort of man, sometimes at the call of some religious or social ceremony sanctioned by custom and tradition, he is apt to carry

cultivator, in the absence of any reserve at the time of a famine, is forced to borrow to pay off the Government demands.

Remedial Measures of the Government

The Government of India realized the gravity of the situation in the early seventies of the last century and since then several measures have been enacted with a view to ameliorate the deplorable lot of the debt-ridden peasantry. The Land Improvement Loans Act and the Agricultural Loans Act, the former to enable cultivators to obtain loans from the Government at a low rate of interest for productive purposes such as purchase of improved agricultural appliances and improvement of land, and the latter for current agricultural purposes such as the purchase of seed, cattle, etc., for areas affected by famine, were passed in 1883 and 1884, whereby Government advanced taqavi loans to the cultivators on the security of their land to be repaid in easy instalments. But owing to so many rigidities and formalities, these taqavi loans could not become popular with the agriculturists. The Land Alienation Act of the Punjab was passed in 1900, with a view to restrict the land transfers and to protect the lands of the cultivating classes from passing into the hands of the non-agricultural classes. But fresh difficulties arose for a new class of money-lenders amongst the agriculturists sprang up and the problem remained where it was. Various other measures were enacted to cope with the monstrous indebtedness but none could mitigate the real hardships of the poverty-stricken cultivators. The U.P. Government has passed many Acts, e.g., The Agriculturists' Relief Act, The Encumbered Estates Act, The Usurious Loans Act of 1934 with a view to make provision for the relief of the agriculturists from indebtedness but we have to wait and see their results.

The Government of Madras deputed Sir Frederick Nicholson to Europe to inquire into and report on the possibilities of introducing in the Madras Presidency a system of agricultural or other land banks. In his famous Report published in 1895-97 he pleaded strongly for the introduction of Co-operative Credit Societies in India. Nicholson summed up his conclusions in two notable

As all the co-operative societies in India have been based either upon the Raiffeisen or the Schulze-Delitzsch types of societies, it is necessary to understand the main features of each of them.

The chief features of the Raiffeisen Societies are the following :—(i) limitation of area so as to secure mutual personal knowledge on the part of members ; (ii) shares, if any, of very small value so as to prevent dividend-hunting and to enable even the poorest persons to become members ; (iii) permanent indivisible reserve fund ; (iv) unlimited liability of all members for all debts of their society in order to ensure better credit and mutual supervision ; (v) loans only for productive purposes, and to members alone ; (vi) credit for relatively long periods with facilities for repayment by instalments ; (vii) the determination every year, by the members of each society, at a general meeting, of the maximum credit that may be held by the individual members at any time as well as of the loans that may be taken by the society ; (viii) absence of profit-seeking ; dividends, if any, being usually limited ; (ix) office holders, not paid for their services and expenditure is kept as low as possible ; (x) provision is made for purchasing of agricultural requisites for sale and hire to members ; (xi) promotion of the moral as well as the social advancement of the members.

The chief features of the Schulze-Delitzsch Bank are ; (i) wider area of operation ; (ii) the shares are high in value but the amount is payable by small instalments which serve the object of compulsory saving ; (iii) there is no indivisible reserve though there is the usual reserve built by carrying a portion of the annual profit to the extent of say 20 per cent. ; (iv) limited liability ; (v) short-term credit ; (vi) high-dividend, there being no limitation on the rate ; (vii) paid administration to secure efficiency ; (viii) there is no personal relationship and mutual touch among the members ; and (ix) special emphasis is laid on the business aspect of the society rather than on the moral one.

Rural and Urban Societies

In 1904 provision was made for the starting of only two types of credit societies, viz., 'rural' and 'urban' and

each other's debts is unlimited. Wherever there is a deficit in the engagement of a society to its creditors, this deficit should, after full payment of shares (if any), be recoverable by a series of *per capita levies* upon the members up to the full extent of their property while direct proceedings by a creditor against individual members being forbidden. The principle of unlimited liability exercises a healthy influence by stimulating a constant watch over one another's affairs, and secondly, it improves the credit of the society which can obtain loans at cheaper rates of interest by inspiring confidence amongst its outside creditors.

(iii) *Management.* It is democratic and honorary. Each member irrespective of the number of shares or office held in the society has one vote. The management of the society is entrusted to two bodies: (a) General Committee consisting of all the members, and (b) Managing Committee or Panchayat consisting of five to seven members elected by the General Committee at its annual sitting. The management is gratuitous although the secretary is a paid one sometimes.

(iv) *Membership.* It is open to all those who are of a good and sound character. The admission of members into the society rests in the hands of the Managing Committee. Special care as to the honesty and industry of the new members is needed for societies having dishonest and irresponsible members eventually come to a sorry end.

(v) *Funds of the societies.* The funds of the society are raised from entrance fees, share capital, if any, deposits from members or non-members and other borrowings from Central Banks. Occasionally, the State also grants loans. The reserves built by societies, in course of time, also swell their funds and reduce their dependence on outside financing agencies. The extent of external capital whether in the shape of deposits or loans, is governed by the limitations placed by the bye-laws, and can only be raised by the vote of the General Committee.

(vi) *Purpose and period of the loans.* Loans are provided to members only for three objects—productive purposes, non-productive purposes, and redemption of past debts. Loans for current agricultural purposes such as

members of the co-operative societies have been of inestimable value. We are told that as a result of co-operation "the idle man becomes industrious, the spendthrift thrifty, the drunkard reforms his ways and becomes sober, the hunter of taverns forsakes the inn, the illiterate, though a grandfather reads and writes."

Economic benefits. The primary purpose of co-operation is economic, and the benefits which it has conferred are mainly, though not exclusively, economic. The agriculturists of India are now saving more than a crore of rupees a year, due to the lowering of the rate of interest which is not an inconsiderable achievement of the Co-operative Credit Societies. Moreover, money that had lain idle and capital that was hitherto inaccessible and which would have gone into unproductive channels, have come into the hands of the agriculturists for the improvement of agriculture and the removal of indebtedness. Besides, the societies have encouraged the virtue of thrift, checked the extravagance and freed the agriculturists from the dangerously facile credit of the money-lenders. Co-operation has greatly facilitated the work of the Agricultural Department in popularising, through societies, improved seed and cattle, cheap and better manures, efficient improved implements and, in general, helping the realization of the ideal of 'better farming, better business and better living.'

Moral effects. The enforcement of thrift is of course the chief moral result of the co-operative credit societies. Persons with loose ways of living and such delinquencies are debarred from the membership of the societies; the only way to purchase the membership is to improve one's morals. Litigation has markedly decreased in some quarters and disputes are now settled by arbitration. 'Where co-operation rules litigation and extravagance, drunkenness and gambling are at a discount' The societies have improved the character and general tone of morality and promoted the development of a feeling of 'all for each and each for all.'

Educative effects. Education follows in the wake of co-operation. The co-operative movement has quickened the intelligence of the ryots and awakened their power

Co-operation amongst ordinary members in a society is altogether absent. Little interest is manifested by the members in the working of their society ; they take it to be a more cheap credit agency engineered by the Government officials. Few of the members truly realize that the success and strength of their society depends on the honesty, fair-dealing, self-help and mutual trust of their colleagues.

(ii) *Illiteracy.* It is a great canker in the progress of the co-operative movement in India ; its corroding effects are felt in every branch of the co-operative activity ; unpunctuality of payments ; fictitious payments ; large appropriation of money by the office-holders ; mismanagement and favouritism are some of the resultant evils of this drawback.

(iii) *Absence of thrift.* The value of thrift is not yet realized by the people ; it is the basis of co-operation. Co-operation and thrift go hand in hand. As a result of the improvident habits of the people, many beneficial effects of co-operation are completely neutralized.

(iv) *Defective audit.* It leads to irresponsibility and bad management. The Central Banking Inquiry Committee remarked, "Audit, supervision and inspection of societies which are closely allied functions are now vested in two and sometimes in three different agencies, resulting in much overlapping of work and waste of effort and money. After a full consideration of these points, and of the efficiency of auditing system in European countries like Germany and Austria, we recommend that for the due discharge of the statutory functions of audit special district unions should be formed to carry out audit, supervision and inspection of the societies."

(v) *High rates of interest.* In spite of all the facilities and privileges granted by the Government, the rates of interest charged by the co-operative societies are still high. The result is that many cultivators do not care to join the society because they can get money at a cheaper rate of interest elsewhere and at the same time manage to keep their money transactions in secrecy, a state in which everybody would like to live.

CHAPTER XXVI

PROFITS

The Nature of Profits

Having understood how the share of landlords, wage-earners and capitalists is determined, let us now proceed to inquire respecting the share of the entrepreneur who, besides assuming the responsibility of establishing, organizing and conducting a business enterprise, also undertakes the responsibility of risk incidental to the enterprise. In a restricted sense, as understood by economists, profits consist of the remuneration for the highly valuable services of the entrepreneur and compensation for the risk undertaken by him.

Profits must be distinguished from the income of organization which is commonly relegated in a joint-stock company to the salaried managers and organizers who are quite immune from any risk of the enterprise. In an industry, the entrepreneur engages the services of landholders, capitalists, wage-earners and organizers, and pays them stipulated sums of rent, interest, wages and salaries respectively, even though his business runs into a financial crisis. Before the actual production, he enters into a contract with the various agents of production, he pays them slightly less than their prospective productivity because firstly, he cannot make a correct estimate of the productivity of each factor because market conditions are so unstable and changing, and secondly, he stipulates to pay their remuneration long before the actual realization of the money from the sale of the commodities produced by them. The residue, left after the payment of the stipulated sums to the factors he has hired in the production of his wealth, is the reward of his enterprise, known as *profits*. Profits thus appear as a residual income, but according to Carver this does not

which is possessed by entrepreneurs in varying degrees and which in its highest forms is specially scarce. He regarded profits as being of the same genus as economic rent, and showed that the rate of profit was determined in much the same way as the rent of land. He maintained that profits are due to exceptional abilities or exceptional opportunities of the entrepreneur. Just as rent is due to superior fertility or situation, and just as there are various graded qualities of land, similarly there are varying degrees of ability till at the margin we find those unfortunate employees who earn only a bare subsistence and whose profits amount to nothing and thus, profits are a true rent of ability.

But the modern economists do not agree with these conclusions of his theory, and argue that an employer will have no inducement to remain in business, unless he is earning at least a certain minimum rate of profits which is the normal rate in that industry. If the employer does not make any profit for the services of his entrepreneurial ability, he will go out of the market and become a wage-earner. Clearly, employers possessing rare ability receive high profits; but even at the other end of the scale, firms working under the most disadvantageous conditions must pay a reasonable rate of profits to the employers. But the price of the produce is regulated by the *representative or average* firm. On either side of the representative firm, there will be some firms which are highly efficient and others exceptionally inefficient, but it is asserted that prices will tend to adjust themselves to the expenses of the representative employer and not to the expenses of the most inefficient employer. In the short period market, it is just possible that the marginal entrepreneur may not be making any profit but he struggles into business and in the long period market, he must receive a normal rate of profit if he is to continue his productive activities in that industry.

The Tendency of Profits to Fall

Like interest, the rate of profits too, tends continually to fall with the march of economic progress. Pure profits which are a result of the differential advantages enjoyed by the superior entrepreneurs are always tending to dis-

2. *Monopoly gains.* Further, in computing net profits of an employer, all gains which are due, not to the superior efficiency of the employer, but to non-personal causes must be deducted. Monopoly gains may be cited as an example of such extra gains. An employer may have the advantage of a monopoly power which may enable him to reap high monopolistic gains, over and above his ordinary profits. Such gains cannot be classed as net profits as they are not attributed to his personal efficiency.

3. *Conjunctural gains or chance profits*, resulting from a favourable conjuncture of circumstances which could not have been foreseen, are secured by the enterprisers. These chance gains or windfalls are the result, not of any special foresight or efficiency of the entrepreneur, but a matter of chance.

4. *Gains due to superior ability and risk undertaking.* The balance of gross profit which is left after deducting the various items mentioned above may be regarded as pure or net profits. They are due to superior enterprise and bargaining ability of the entrepreneur. The responsibility of risk falls on the shoulders of the entrepreneur and his income representing the reward of risk-taking constitutes his net profit. Another element of the entrepreneur's profits lies in his gains of bargaining capacity. "Skillful bargaining swells the entrepreneur's profits, firstly, by increasing the prices he gets for things, and secondly by decreasing his expenses of production." However, entrepreneurs whose services are needed by society differ in remarkable degrees concerning their organizing ability and skill in bargaining, and they range from the marginal entrepreneurs who can just manage to earn minimum profits, to those rarely-gifted persons who, in common phrase, seem to turn everything they touch into gold, and who are as resolute in failures as steady in successes. "Pure or net profit is, therefore a purely personal *differential* gain which accrues to the entrepreneur by reason of his enterprise and organizing ability, and the amount of that profit is determined by the extent to which the abilities of the entrepreneur surpass those of the marginal class of employers." A diagrammatic representation of gross profits into their component parts is given on the next page.

annum, and the first turns over its capital 4 times in the year and the other only once, the profits on the turnover must be 12 per cent., in the latter case, and only about 3 per cent. in the former." Thus we find that the average net profits in two businesses on the capital invested are 12 per cent. yet if we take into account the rate of profits on the turnover, it is 12 per cent. in one, and 3 per cent. in the other. Those businesses in which rapid turnover of capital is possible the rate of profits per turnover is small but the average net profits, in view of the several number of turnovers, is not lower than those businesses in which the turnover of capital is slow and the rate of profits per turnover is large.

Although there is no general tendency of profits on the turnover to equality, there is in each trade and in every branch of each trade, a more or less definite rate of profits on the turnover which is regarded as a 'fair' or normal rate.

CHAPTER XXVII

BUSINESS OPPORTUNITIES IN INDIA

In this chapter, we propose to deal with the business opportunities that are at present available for increasing the total productivity and prosperity of India. Land, labour, capital and organization are the factors of production and the national prosperity depends in a country upon their availability and the ability to utilize them for productive purposes. India is one of the largest countries both from the point of area and population in the world. She is abundantly rich in her natural gifts which not only provide us with large supplies of food-stuffs but also give us all sorts of raw materials upon which is ultimately based the development of our manufacturing industries. India possesses also an inexhaustible supply of cheap labour and although the proportion of our unskilled to skilled labourers is very large, this much is certain that with increased facilities of general and technical education, improved organization and better provision of necessities of life, the Indian labourer will be in no way inferior to any of his competitors in any part of the world. The great intellectual and constructive abilities of Indians, cannot be denied by any observer who has got the slightest acquaintance with the conditions prevailing in India. As far as capital is concerned, India does not, owing to her general poverty, possess the necessary amount of capital for exploiting her natural resources to the fullest extent. But it is estimated and, rightly too, that with improved and suitable banking facilities and a better utilization of capital resources, adequate amounts of capital will be forthcoming from her own people for the industrial development of the country. The amount of potential capital at our disposal is enormous. But in spite of all these vast natural resources, plentiful supply

conspicuous by its absence in India. Mere reading or writing or committing to memory scriptural books does not solve the problem of India's industrial inefficiency. Industrial, technical or commercial education is sadly lacking in India. It is on account of this industrial inefficiency arising from the want of general and technical education that our natural and capital resources are not exploited productively and economically.

Unemployment as also under-employment is an alarming cause of the enormous wastage of India's manpower, more particularly at the present time when it has shown a tremendous increase due to depression in trade and slump in industry and agriculture. In the agricultural industry, agriculturists have to pass several months in compulsory inactivity owing to the seasonal work and the lack of other subsidiary occupations. Such periods of inactivity in the absence of other gainful occupations are, in the majority of cases, spent in idleness or frittered away sometimes in uneconomic activities or vicious habits. The artisans fare no better; they also suffer from under-employment in so far as they cannot find a remunerative engagement of their labour throughout the year. Regarding the industrial labour in organized industry, it may be said that a great amount of waste is brought about due to the migratory character and widespread habit of absenteeism of Indian labourers.

Coming to the important question of unemployment among the middle classes, the manifestations of waste are visible in more than one way. Unemployment among the educated middle classes is rapidly assuming alarming proportion in the absence of any effective remedy. Every year a large number of matriculates and graduates of all description are being manufactured by Boards and Universities with natural consequence of a slump in the market where everyone educated hunts for service while new avenues of employment are almost blocked up. They are driven, for no fault of their own, from pillar to post either to be perished in semi-starvation or to join the humiliating ranks of employment where the remuneration can hardly be said to be commensurate with the money, energy and time they expended in their education.

is sure to continue unless people realize completely that it is more convenient and profitable to invest their savings in productive concerns rather than burying them unproductively in iron safes or at the back of a brick in a wall.

In the above paragraphs, we have attempted to present a sketchy idea of the enormous wastage of natural, human and capital resources that is taking place in India. One of the most important causes of India's poverty and her industrial backwardness lies in the fact that for one reason or another we have failed to avail ourselves of the colossal opportunities offered by the natural resources of this country. They have proved themselves incapable in making due provisions for the utilization and conservation of their natural and human resources, and in the transformation of their social savings into social capital for the economic and industrial development of the country. In short, the two important factors of economy and efficiency which count so much in industrial progress are conspicuous by their absence in India. The example of industrial countries must prove an eye-opener to India as the former ones have economized their resources, utilized them efficiently and grown rich ; whereas, we have wasted our resources, handled them inefficiently and grown poorer. The solution of Indian poverty is, however, by no means an easy task. It is not an individual's work ; it requires the co-operation of the varied forces of the entire country and chiefly the financial and organizing resources and abilities of the capitalists, industrialists, bankers, expert businessmen and entrepreneurs. The necessity of Governmental guidance, direction and control in launching a constructive programme of economic development in all its various phases seems all the more imperative in a country like ours which is inhabited by illiterate, poor and unambitious people. With a more sympathetic, enthusiastic and fostering policy of the Government, a greater awakening attendant upon right propaganda and education of the Indian masses and the creation of a more favourable atmosphere for the industrial development of the country, this colossal waste which is now going on unchecked can be arrested

and a false notion of dignity, it has failed in modern times to attract men of the right type. The entire agricultural industry is manned by ignorant, poor and conservative agriculturists who seldom care to move with the march of time. The need of the hour is to awaken them out of their age-long torpor by constant propaganda, general and technical education pertaining to their profession, demonstration and discourses in order to make them familiar with the achievements of the agricultural science. Certainly, the problem is not so easy as it is often supposed to be ; many difficulties of a most acute character would arise in the course of disentangling intricate situations that have, in the absence of any effective remedy, gained constant strength with the passage of time, but it is expected that with greater awakening of the masses and the national outlook on the part of the Government, much of the present deplorable situation would come to an end. The poverty of the agriculturists is quite an obvious fact ; it is one of the greatest impediments in the way of an agricultural improvement. Any improvement which brings more profits to the cultivator will surely win his confidence, and will make the execution of the works of agricultural improvements much easier.

It is for the increase in his profits that our efforts should be solely directed. At the present time, in view of the peculiar drawbacks, the Indian cultivator carries on extensive cultivation with the result that the average yield from land is low. In every other country of note, agriculture is carried on intensively and every effort is directed towards eliminating any sort of waste. Therefore, intensive methods of cultivation should be resorted to by the cultivators. This system involves an expenditure on permanent improvements like irrigation works, good manuring, more up-to-date methods of cultivation, better varieties of seeds, and a wiser system of rotation of crops. For enterprising men, equipped with requisite technical knowledge of farming operations and provided with sufficient capital to finance the introduction of improved implements which economize labour and time, there lies a vast opportunity in this direction which has hitherto been neglected by real and competent businessmen. With

lenders and shrewd middlemen. These societies will purchase all the produce from the member-cultivators, stock it after grading it into different varieties, will make arrangements for its sale directly with some big dealers by avoiding strictly all the long chain of middlemen, and thus make an extra profit for the amelioration of those whose lot we wish to see improved.

Fruits and Vegetables

The view that people in the country should be encouraged to consume and produce mere fruits and green vegetables, was expressed by the National Planning Committee. It expressed the opinion that the present production and consumption of these things in India was very low and infrequent, which affected the health of the people considerably. It was, therefore, necessary to increase their consumption as part of the regular diet to such a degree as may be deemed adequate by nutrition experts.

To achieve this object besides encouraging cultivation of fruits, the fruit grower should be protected by a levy of duty on imported fruits, that sufficient areas of land should be set apart for their cultivation and cold storage facilities be provided.

A Survey and Scope of Industrialization

-It seems advisable to give some general impressions regarding the present state of Indian industries and see how far a rapid and intensive development in the manufacturing industries can bring about a permanent economic relief to India. That the present industrial structure of India is based on very shaky foundations cannot be denied by even a casual observer. Although we have in our country the elements of almost every type of industry, it should be pointed out that the development of two types of 'basic' or 'key' industries—chemical and engineering—has been sadly neglected in India. That our sole dependence for the supply of machinery, chemical products and other accessories on the foreign industries, in the absence of metallurgical and chemical industries in India, is a clear indication of the weakness of our industrial organization. In fact, the very basis of Indian industrialization stands on miscalculated principles

sion of 1880, when the pressure of population on land was not so acute, urged the necessity of opening up other avenues of industrial occupation in order to transfer a portion of agricultural population to other pursuits. The establishment of manufacturing industries will not only attract a large section of the agricultural population but also relieve to a considerable extent the problem of unemployment among the educated classes which has assumed alarming dimensions at the present day. With the encouraging policy of the Government in respect of India's industrial development thus, creating an atmosphere of confidence in the minds of capitalists about the security of their resources and profits, competent organisers will emerge out to place Indian industry on a much sounder footing. As H. Calvert in 'Wealth and Welfare of the Punjab' remarks "the best training for the future manager is to be acquired in the mill and amongst the men he is to manage. The art is picked up in the atmosphere of industry." India possesses, without any doubt, great facilities in marketing and does not stand in need of other markets, at least for a brief space. Every year manufactured articles worth many crores of rupees are being imported from foreign countries, the raw materials of which exist in considerable quantities in our country. It may be repeated that all the essential conditions favourable for the industrial expansion of a country exist in India to a remarkable degree and there is no reason why with the help and patronage of the Government coupled with a real patronage from the Indian people the national industries should not flourish and succeed in relieving the over-crowded pressure upon land, and in improving the general economic condition of the entire population of India.

Let us now examine a few typical industries and see how far natural resources of India can be utilized with Indian labour and capital for the benefit of our countrymen.

Textile Industries

The cotton industry is largely financed and managed by Indians but still there exists a vast opportunity for further enterprise. It is the premier industry of India

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and stands next to agriculture in importance. At present nearly two-thirds of the total home demand is met by the indigenous handloom industry and Indian mills while cotton goods imported from abroad supply one-third of the total demand of the people. Thus in order to stop these huge imports of cotton goods which come to about sixty crores of rupees under normal conditions, a vast scope is available to the capitalists and entrepreneurs for undertaking new cotton manufactures or improving the old ones. With the development of cotton manufactures within the country and the utilization of raw cotton which is now exported to foreign countries only to find its way back to us in the form of finished articles, we would be relieved of the foreign supplies. Industrial combination of the cotton-mill industry, after the model of foreign mills, with a view to introduce new technique, including automatic machines, to specialise in certain lines of production by individual mills, to allocate the quantities to be produced by each mill, and to consolidate the purchase of raw materials and the sale of finished products, is the crying need of the moment which alone can ensure its speedy progress.

The jute industry which is mostly managed and financed by foreigners enjoys monopolistic advantages, but at present it manufactures about half of the raw jute produced in the country. With the restoration of normal economic conditions and the introduction of better organization, there lies a further scope of the manufacture of raw materials now exported to foreign countries.

The silk industry also presents vast possibilities for enterprise and profit-making. Formerly, the Indian silk embroideries and brocades were well known and highly appreciated, but towards the end of the nineteenth century the Indian weavers were forced to lay down their antiquated tools before the onslaught of cheap foreign silk produced by labour-saving machinery. The silk industry consists of sericulture, reeling and weaving. As both sericulture and reeling methods are not satisfactorily developed on modern lines in India, the weavers prefer the use of imported silk yarn which is cheaper in price and superior in respect of general finish. With im-

proved methods of growing mulberry and rearing selected breeds of silk-worms, the introduction of scientific methods for reeling, the modernization of the primitive processes in respect of weaving and with efficient organization amongst the silk weavers for the purchase of silk yarn and the disposal of silk products, there is every likelihood of India's capturing her lost markets.

Metallurgical Industries

The iron and steel industry has made an appreciable progress during the last two decades but its development has not been commensurate with the requirements of the country. Our dependence on foreign countries for the supply of machinery, machine tools and hardware goods is a great weakness of our industrial system. As their imports amount to many crores of rupees annually, there exists a considerable scope for the manufacture of iron and steel products. Moreover, as industries increase in number consequent upon a right industrial policy a large demand for machinery, machine tools and other accessories will be created. The development of mechanical engineering works holds out great possibilities in view of the recent expansion in the electrical engineering works. The subsidiary industries depending upon the development of this basic industry will also offer new opportunities of investment and profit-making. By adopting the latest industrial technique in making industry, improving the means of communication, and increasing the technical skill of the workers, the vast mineral resources can be utilized to the great benefit of entrepreneurs, capitalists and labourers alike.

Forest Industries

In spite of the noteworthy improvements introduced in recent years by the Forest Department the development of forest industries is yet in its initial stage. The potentialities of Indian forests have not been fully explored and there exists practically an unlimited scope for the development of forest industries. It has been, elsewhere, mentioned that Indian forests contain all kinds of trees and the numerous products available thereof, if fully exploited on a commercial scale, will tend to augment the national wealth of the country.

The paper industry notwithstanding many a vicissitude in the past, holds out great possibilities of extension, as the immense resources of raw materials discovered so far for the manufacture of paper are not yet fully exploited by the paper mills working in India. At the present time the Indian paper mills are supplying about 30 per cent of the total Indian demand while the rest of the demand is met by the imported paper which amounts to nearly 3½ crores of rupees annually. India has immense resources in sabai, munji and savanah grasses found growing extensively in Burma, Bengal, Assam and the United Provinces. Besides grasses found suitable for the manufacture of paper of fine and medium texture, India has vast resources in bamboos found abundantly in Burma, Bengal, and South-Western India. It has been estimated that bamboo and grasses available in India, if exploited to their full capacity, may produce pulp equal to the entire world's demand. With the growth of education and literacy in the masses of India, the paper industry promises a bright prospect for the establishment and successful working of paper mills in India.

The lac industry of India due to its somewhat monopolistic nature occupies a very prominent position in the world market. India exports worth crores of rupees annually to foreign countries both raw and manufactured lac (i.e., shellac and button lac) which is chiefly employed in the preparation of paints and varnishes, in the ornamentation of wooden and metallic articles, in the manufacture of gramophone records, in electrical works as an electrical insulating agent and in several other minor manufacturing works. The methods of manufacturing lac so far employed have been unscientific involving thereof much waste. As our lac industry is seriously threatened by cheaper lac substitutes, every effort in order to successfully meet the competition from synthetic lac should be made to reduce the expenses of production.

The rubber industry is assuming growing importance as the area under rubber cultivation has increased amounting to nearly 130,000 acres. But unfortunately in the absence of rubber manufacturing concerns, except two

or three factories working at Bombay and Calcutta, a major proportion of raw rubber grown in India is exported to the United Kingdom and the United States only to find its way back in the shape of finished rubber goods. A better organization of rubber industry, an investigation into the high yielding capacity of trees, and an improved technical knowledge in respect of its production are the essential requirements of the day.

The allied industries of turpentine and resin are comparatively of recent development and the potential resources for their expansion are believed to be enormous. At present the production of turpentine oil is inadequate to meet the internal demand as large quantities of superior grade oil and resins for various industrial purposes are imported from America and France, but it is estimated that if all the available resources of turpentine are exploited to their full strength, India will not only become independent of the foreign supplies of turpentine but also export the surplus to foreign countries.

The sandalwood industry deserves a serious attention on the part of thoughtful Indian industrialists in view of the fact that sandalwood tree is a practical monopoly of India and the demand for its products arises from the different parts of the world for a variety of purposes. This aromatic tree is chiefly found in South India. It is used in making carved boxes, picture frames, walking sticks, handles, pen-holders, etc.

The oil is obtained by distilling the chips of sandalwood which is extensively used in perfumery and manufacture of toilet soaps. Apart from the exportation of sandalwood oil, a large quantity of sandalwood is also exported for distillation to foreign countries, particularly the United Kingdom and the United States. So far the methods employed in the extraction of oil and the manufacture of attar, perfumes, etc., are primitive besides being wasteful. In order to reduce the cost of production of oil and to successfully meet the competition from similar products, it will redound to the credit of manufacturers if they adopt the up-to-date scientific processes of distillation.

Apart from these, several other commercial products

can be made to yield good returns. Amongst important ones there are essential oils, like lemon oil, khas oil, eucalyptus oil, cardamom oil, tanning materials such as Babul bark, Tarwer bark and Myrobalans, etc., dyeing materials obtained from the roots, barks, fruits and flowers of trees and plants, and gums obtained from the exudation of some varieties of trees.

Chemical Industries

To reiterate, the successful development of many indigenous manufactures has received a considerable setback due to the absence of Indian chemicals. That India possesses sufficient raw materials to start her chemical industries was clearly demonstrated during the War when several chemicals were produced in the country. India also maintains an ample quantity of raw materials for the manufacture of heavy chemicals such as sulphuric acid, soda ash and caustic soda, so essential in the production of all other chemicals. The industries depending upon the chemicals are paper, glass, ceramics, fertilisers, matches, fine chemicals, dyes, paint and varnishes, artificial silk, textiles and explosives. Sulphuric acid is extensively employed in various industries but due to the lack of sulphur deposits, India relied solely upon foreign imported sulphur for the manufacture of this important chemical. Now with the new possibilities of manufacturing sulphuric acid from gypsum, there lies an endless opportunity of enterprise for the resourceful industrialists of India. It is believed that extensive occurrences of gypsum exist near the famous Slate Mines of Khewra. Besides this important raw material for the manufacture of sulphuric acid, salt, limestone and coal are also found in large quantities from which soda ash and caustic soda can be manufactured. Thus the potential resources of heavy chemical industries are enormous and in view of their great national importance for the industrial development of India, it is a matter of prime importance and serious consideration that this industry should be financed and managed by Indians in the interest of indigenous manufactures. The development of this 'key' industry would mark the salvation of many struggling industries and of those which have not yet made their appearance on the soil of India.

Leather Industries

That we are abundantly rich in animal resources needs no reiteration. Influenced by the western ways of living, the demand in India for leather requisites such as boots and shoes, saddlery and harness, leather bags and purses, leather trunks and holdalls, straps and belts, gloves and other fancy leather articles has had a tremendous increase and the tendency is always in the ascendant.

The tanning and leather industries in India although practised from immemorial times have achieved in recent years a remarkable progress as a result of the introduction of western methods of tanning and manufacture. India is fortunate in possessing a large variety of animals which can supply different qualities of hides and skins suitable for the diverse requirements of her people. Goat and sheep skins are softer than hides and are employed in the manufacture of superior qualities of shoes, boots and gloves. Excellent tanning materials are also available in India. At present Indian tanneries and leather industries equipped with the most up-to-date machinery and organization are not sufficient to work up the raw hides and skins available in India, as a result of which large quantities of raw hides and skins are exported to foreign countries particularly to Germany and the United States. Tanned hides are mostly exported to Great Britain. Formerly and even now, the occupation of curing and tanning hides and skins is generally relegated to ignorant and backward castes which speaks to some extent of the backward and imperfect state of our tanning industry. The loss incurred through the native tanning processes is incalculable. Here lies a good field for enterprise and profit-making. The improved methods of curing and tanning through vegetable tans and chrome process will not only result in almost complete cessation of the exports of raw hides and skins but will also put a severe check to the imported leather goods and leathers amounting to nearly fifty lakhs of rupees annually.

Apart from this prominent industry, many other industries depending for their raw materials upon the by-products obtained from the slaughtered or dead

animals can be started with success in India, provided requisite technical knowledge, sufficient capital and intelligent organization are forthcoming

To sum up, it can be said that there are many channels of business opportunities which have so far received a slight attention or remained uninvestigated by the Indian industrialists. Practically in every branch of economic and industrial activity Indians can make much headway and oust the foreign competitors who, today, on account of their superior skill in technique and organization easily forbid Indian industrialists to enter in any important market of the world. A co-ordinated comprehensive programme of rural and industrial reconstruction, in the light of modern economic and financial theories of the State conceived in agreement with the wishes and opinions of the leading Indian economists, industrialists and financiers, is indispensable to avoid waste of effort, and to ensure steady economic, social, intellectual and political progress of the country.

To give a great industrial push to the country and to assure food and work to the people, some definite economic plan is needed. In the western countries, the Governments have started the schemes of four or five years plan to bring about industrial advancement of their countries. Germany's Four Year Plan consists of six departments, namely, (1) Bureau of distribution of raw materials, (2) Department of distribution of labour, (3) Food supply department, (4) Foreign currency and banking department, (5) Department of price control, and (6) Miscellaneous department. Should we not think seriously of some such scheme for India also? A National Planning Committee has been appointed in India and we were all anxiously awaiting its recommendations, but the present war has checked its progress. Every effort is being made now to industrialise the country to meet the various requirements of the war. New industries are coming into existence and the country's production of manufactured is being multiplied many-fold.

CHAPTER XXVIII

PUBLIC FINANCE

Its Meaning and Importance

It is known to all that there are some functions which are necessary to the civic organization of a country and which, in one shape or another, all Governments alike have undertaken. The State like individuals undertakes some activities either directly or indirectly, the main object of which is to promote the economic activity and progress of the community at large. All these economic and industrial activities that we observe all around us would have been retarded, if not altogether paralysed, to a great extent in the absence of facilities conferred by the State through its various departments. The Government of a State requires the services of the navy, the army, and the air craft for the defence of the State from external danger and internal disorders, the constabulary for the maintenance of law and order, the judicial courts for the administration of justice and the punishment of crime, the prisons for reforming the ways of the offender, the asylums for the poor and the incapable, the educational institutions for educating people the right duties of citizenship and the various arts and crafts, the hospitals and dispensaries for the preservation of public health, and the railways, roads, harbours, canals, buildings, post and telegraph for expediting the industrial and commercial progress of the country. For the successful discharge of these multifarious functions under modern conditions, the State requires annually a large amount of money which has to be secured from taxation and various other sources of revenue. The study of the manner in which a Government obtains its revenues and spends them is called 'Public Finance.'

cc With the gradually expensive functions of the State,

the expenditure of the State has enormously increased in recent times and an enormous amount of revenue through various sources has to be raised annually in order to meet the increasing functions properly

Public and Private Expenditure Compared

The State like the individual has wants but there are several important differences between public expenditure and private expenditure. A characteristic difference is that an individual always attempts to augment his income and tries to adjust his expenditure according to the income he earns, while in public finance the process is reverse inasmuch as the necessary expenditure is first determined by the State and then sources are tapped for collecting an income that will balance the predetermined expenditure. Thus in public finance the income is determined by the expenditure and not the expenditure by the income. Another characteristic of public finance is its compulsory character. In private finance, a surplus of income over expenditure is desirable while in public finance a surplus would be taken as a defective finance and would invoke a lot of adverse criticism from the taxpayers. In public finance as against private finance, a generous provision has to be made for the future but the statesmen should not go too far in discounting the future as it may produce resentment among the taxpayers.

Sources of Public Revenue

From a theoretical point of view there has been a great controversy among economists regarding the classification of public revenue or income. Without entering into those intricate discussions, it may be pointed out that Governments for discharging the numerous functions in modern times obtain their revenues from the following sources —

- 1 *Public or State domains* The revenue from public domains consist of the income from agricultural land, forests and mines in which the State holds a proprietary right. Forests being an asset of considerable economic importance to the community are largely controlled and managed by the State. Mining areas being the property of the Government bring in a considerable amount of income either when sold or utilized.

2. *State enterprise.* The State in almost every country undertakes certain businesses both productive and distributive such as the operation of post-office and telephone services and other undertakings of a monopolistic and public utility character like the provision of pure water, construction of railways, and operation of model industrial establishments. Industries of a competitive character are usually relegated to private enterprise. Many commercial undertakings are undertaken by the State in the interest of the people.

3. *Investments of the State.* The State may obtain some portion of revenue from shares held by it in some businesses, specially in businesses of public utility service.

4. *Public loans.* Public loans are a source of revenue giving rise to public debts. In times of emergency for covering the cost of extraordinary services such as for the construction of canals or railways, or financing any war, the Government takes loans on which interest together with the principal has to be paid by the future taxpayers.

5. *Voluntary contributions.* Frequently voluntary gifts are made over by wealthy subjects to the State for some public purposes to help it in emergencies. Very commonly donations are given by rich persons for the progress and expansion of educational institutions or such other social services.

6. *Fines and penalties.* They are called accidental and irregular sources of income as the object of their imposition is not primarily to augment the income of the State. Forfeits and escheats are other means by which a State obtains some portion of its income. Escheat is a legal term which means that everything lapses to the public exchequer in default of other heirs.

7. *Revenue derived from the incomes of different persons and corporations :—*(a) *Fees* ; (b) *Special assessments*, and (c) *Taxes*.

(a) A fee is a payment made by persons who receive a special service rendered by the State—the service, however, being non-commercial in character, e.g., court-fees, stamp-fees, license-fees, etc.

(b) A special assessment is defined by Prof. Seligman as "a compulsory contribution, levied in proportion to the special benefits derived, to defray the cost of a specific improvement to property undertaken in the public interest." Special assessments, unlike fees, are levied specially by municipalities to meet some extraordinary expenditure such as the special improvement of a particular thoroughfare in a particular locality of the city.

(c) Taxes form the bulk of the State revenues in modern times. They are compulsory payments of wealth made to the public authority by its people to meet the general expenses of the Government.

The Meaning and Nature of Taxes

"Taxes are levied upon practically all persons in the community to cover the cost of services rendered by the State for the benefit of the community generally." A tax is a compulsory charge imposed by a public authority and, as Prof. Tausig puts it, 'the essence of a tax, as distinguished from other charges by Government, is the absence of a direct *quid pro quo* between the taxpayer and the public authority.' From the nature of the definition given above it is clear that the State while charging taxes compulsorily from individuals does not give them any sort of guarantee regarding the amount of benefit in return that they shall receive from such a charge. While travelling in a railway, posting a letter, instituting a suit in a Court, or registering a bond we are compelled to make a payment in lieu of such a service but our payment is conditional upon our option to utilize such services rendered by the State. One who prefers to abstain from travelling in a railway is never compelled by the Government to make any kind of contribution on that account. The receipts from railway tickets, postage stamps, court-fees and stamp fees roughly show a correspondence between the prices charged and the services received by the users. But no such correspondence can be said to exist between the services rendered by an army or navy, a fire department, or the police force and the payment made for the cost of their maintenance. Almost every resident of a State is called upon to contribute for its upkeep irrespective of the advantages he

or she derives, directly or indirectly. A tax, therefore, is a compulsory levy which is exacted from all alike by public authority under stated conditions and without any regard to the individual's use of the services supplied. "The essential characteristic of a fee is the existence of a measurable special benefit together with a predominant public purpose.... The absence of a public purpose makes the payment a price, the absence of special benefit makes it a tax."—*Seligman*.

Principles or Canons of Taxation

According to what principles or rules taxes should be levied and the individuals be made to contribute towards the cost of the various public services rendered has been discussed by economists, since the days of Adam Smith, at great length. Adam Smith was the first economist who in his classic book "The Wealth of Nations" enunciated the four celebrated canons of taxation which still form the starting-point of a sound policy of taxation. These are—the canon of equality, the canon of certainty, the canon of convenience, and the canon of economy. Besides these famous canons, the modern writers have added other principles, viz., productivity, elasticity and simplicity.

1. *Equality*. "The subjects of every State ought to contribute towards the support of the Government as nearly as possible in proportion to their respective abilities, that is, in proportion to the revenue which they respectively enjoy under the protection of the State" This canon of equality or equity has been much discussed by economists and various theories have been propounded to secure justice or equity in taxation. This canon requires that every person must contribute in proportion to his 'ability to pay.' If ability of people to pay taxes is measured in proportion to the revenue which they respectively enjoy, then certainly equality of sacrifice or justice in taxation cannot be secured. How to measure 'ability to pay' and 'equality of sacrifice' is still a vexed question. Shall an individual pay just in proportion to his income, or more? The conservative view maintains the principle of proportion according to which persons' income, whether large or small, whether earned or unear-

ned, should be taxed all in proportion to their income and no more. On the other hand, the radical view maintains the principle of progressive or graduated system of taxation, according to which the rich should pay not only in proportion to their incomes, but more than in proportion, in other words, the rate of taxation should increase as the income increases.

2 *Certainty* The tax which each individual is asked to pay ought to be certain and not arbitrary, its time of payment, its manner of payment and the quantity to be paid ought all to be clear to the contributor. It is good both from the point of view of the taxpayer and the Government. This canon helps to make the Government certain about the probable yield of a tax and the time of its receipt into the Exchequer. Taxes need not be arbitrary nor they be collected arbitrarily. The certainty of a tax leads taxpayers to make an automatic provision for the amount of the tax without undergoing much botheration and trouble, as he gets accustomed to it. Hence the dictum that "an old tax is a good tax, and a new tax is a bad tax."

3 *Convenience* "Every tax ought to be levied at the time or in the manner, in which it is most likely to be, convenient for the contributor to pay." It minimizes the burden of the tax and brings the least interference in the process of industrial activity of the community. Indirect taxes generally conform to this principle to an appreciable degree as the consumers pay the tax when they are in a position to purchase the article subject to tax.

4 *Economy* Every tax should be so devised as to take out of the pockets of the people as little as possible over and above what it brings into the treasury of the State. This principle maintains that those taxes should be chosen (i) the cost of collection of which is small in proportion to the proceeds, and (ii) the loss caused to the community is small in proportion to the proceeds. This canon is violated if for the collection and administration of certain taxes a large army of tax collectors and inspectors is required, or if in their imposition they restrict the progress of trade and industry or cause unnecessary botheration on the part of the taxpayers.

5. *Productivity.* The tax should be productive and the yield must show a good return. Consequently, a smaller number of taxes productive of a large revenue is to be preferred than a large number of less productive taxes, taking care that the distribution of the burden of taxation on all classes of the community remains equitable. At the same time, the productivity of the tax should not be such as to damage the wealth-yielding sources whence it is derived.

6. *Elasticity.* The tax system should be so contrived as to provide an automatic growth of revenue with the increase of wealth and population. Taxes should be elastic in the sense that in order to meet fiscal emergencies the total amount of revenue can be increased with an increase in the rate of taxation without any great increase in administrative or collection charges.

7. *Simplicity.* Finally, a system of taxation ought to be simple, plain and intelligible to the taxpayers.

Kinds of Taxes

Taxes have been classified into (1) Direct, and (2) Indirect, a classification which is based on the burden, or the 'incidence' of taxation.

A *direct* tax is a tax, the burden of which is mainly borne by the person on whom it is intended to be levied by the taxing authority. Its burden cannot be shifted by the persons upon whom it is legally imposed. Direct taxes are generally levied upon the income and property of the individual. The income-tax, the super-tax and the land revenue are some of the instances of direct taxes in India. If the salary of a professor is taxed, say, at the rate of six pies per rupee, clearly he cannot pass on the burden of the tax to somebody else.

An *indirect* tax is a tax, the burden of which is passed on by the person on whom it is imposed to the shoulders of other persons. It may be collected from one person in the expectation that he will shift or transfer the burden to others. Indirect taxes are generally levied on commodities and transactions. The customs, the salt and the excise duties are some of the examples of indirect taxes in India. Import duties levied on foreign

cigarettes are collected from the merchants importing them, but eventually the amount paid is recouped by them from the smokers who pay the amount of the tax in the shape of the increased price of cigarettes

The *incidence* of a tax is different from its *impact* Chapman remarks "The *impact* is upon the person from whom the tax is collected, but the *incidence* is upon those who pay eventually The process by which ultimate incidence is brought about is known as the process of *shifting*, or *rolling*, or *repercussion* of taxes." In the example of cigarettes mentioned above, the impact of the tax falls upon the merchants and the incidence of the tax upon the smokers In a direct tax, the impact and the incidence are on the same person, when they are different the tax is called an indirect one

It must, however, be pointed out that no hard and fast line can be drawn between direct and indirect taxes, since the distinction between the two sometimes becomes quite imperceptible An indirect tax involves shifting while a direct tax does not But there are cases where even the direct taxes may be shifted to the shoulders of someone else while the indirect taxes meant to be shifted may remain where they were imposed

Advantages and Disadvantages of Direct Taxes

The principal direct taxes are the income-tax, land tax, property tax, inheritance tax, and death duties.

Advantages

- 1 The great advantage of direct taxation lies in its educative influence or civic consciousness that it produces on the minds of the taxpayers Each taxpayer is thoroughly conscious of his contribution to the revenues of the State, and therefore, he begins to display a direct interest in the activities of the State regarding the allotment of public expenditure for the various heads Hence, direct taxation tends to make the public authority more honest, careful and scrupulous regarding its duties and functions towards its subjects

- 2 Direct taxation is more just and equitable as the principle of progression in order to make the rich pay more than the poor can be easily applied

3. Since they are usually collected at the source, the cost of collection is comparatively low and practically no wastage is experienced in their realization. Thus, they conform to the canon of economy.

4. Direct taxes are generally collected at the source and, therefore, there are little or no chances of evasion.

5. Direct taxes are very elastic as their yield can be increased considerably by a slight increment in the rate of assessment without incurring any additional cost of collection and administration.

6. The taxpayer also knows what he has to pay, why he has to pay and when he has to pay.

Disadvantages

1. Direct taxes have invariably proved irritating to the taxpayers specially when attempts are made to increase the rate of the tax. Any slight increase in direct taxation is much resented by the taxpayers as its incidence falls mainly upon them and sometimes grave social and political consequences follow in the wake of their imposition.

2. An accurate estimation of one's taxable capacity even by the most just and expert assessing officers involves several difficulties. Not infrequently, a direct tax causes much hardship to the taxpayers as a result of the wrong evaluation of their incomes. An easy escape is sometimes made by the people in direct system of taxation by producing fraudulent accounts before the income-tax officers.

3. The poorer sections of the community cannot be directly taxed owing to small incomes and heavy cost of collection. It is very difficult and inconvenient to tax directly the income of the daily wage-earners and menial servants as a large army of the collectors will be required to collect and administer taxes thereby, violating the canons of convenience and economy.

Advantages and Disadvantages of Indirect Taxes

In India, the principal indirect taxes are customs duties levied on the exporter and the importer of commodities, and excise duties, e.g., duties imposed on matches, sugar, salt, alcohol, etc., produced within the country.

Advantages

1 Indirect taxes are more popular as they are seldom felt by the taxpayers with that degree of acuteness and resentment as in the case of direct taxation, and, therefore, they are less disagreeable and inconvenient

2 They are convenient because they are paid in small quantities in the shape of higher prices of commodities at the time when the payer has the requisite money to purchase the articles taxed. They are convenient from the point of view of the State as it gets the revenue in bulk from importers and manufacturers

3 The poorer classes of the community can also be taxed and made to contribute some portion of their income to the public exchequer by indirect taxation

4 By a judicious levy of taxes upon luxuries and necessities, equitable system of taxation is easily secured. The rich are obliged to pay more in resorting to the consumption of articles of luxury while the poor escape by refraining from the use of those heavily-taxed articles

5 Indirect taxes are more elastic. The State automatically derives increased revenues in times of prosperity and flourishing trade and commerce without increasing the rates of taxation

6 Lastly, indirect taxes are levied to restrict the consumption of unproductive luxuries and other injurious articles the consumption of which is detrimental to the efficiency of the community \

Disadvantages

1 Indirect taxes are inequitable in that they are regressive in character and fall commonly more heavily on the poorer, than on the richer classes because the poor are the largest consumer of articles of general consumption, e.g., the salt tax, in India, involves a greater sacrifice on the part of the poor than the rich. It is in view of this regressive character of indirect taxes that any kind of levy on necessities has been invariably opposed

2 Indirect taxes are known to have put serious obstacles in the natural growth and progress of trade and

industry in a variety of ways. For instance, an undue high rate of indirect taxes entails sometimes adverse effects on production in that it increases the expenses of production, thereby diminishing the demand of the consumers and the output of the factories.

3. Indirect taxes also encourage smuggling of articles subject to taxation specially when the difference in prices between two places, owing to the different rates of taxation, is quite appreciable. A large army of supervisors is entrusted with the administration of such taxes entailing a heavy loss of revenue to the Government treasury. They are also uneconomical from the taxpayer's standpoint because he is obliged to contribute more than what is actually received by the State.

4. Another serious drawback of indirect taxes lies in the tendency of manufacturers or importers of commodities to raise their prices by more than the actual amount of the tax to the great detriment of the consumers. This argument also proves the uneconomical nature of indirect taxes.

5. The revenue derived from indirect taxes is not very certain unless the demand for the article is very inelastic. In times of economic depression, the income of the State shrinks considerably from indirect taxes as the revenue realized from them is dependent upon the conditions of trade and industry which are ever fluctuating.

The best system of taxation, as advocated by economists, is a judicious combination of both direct and indirect taxes so as to make every individual, rich or poor contribute something, according to his ability towards the general expenses of the Government.

INDIAN FINANCE

The system of financial administration in India that we find set up at the present day is of a very recent growth. Originally the entire administration of the finances of India was vested in the Government of India, that is to say, the entire responsibility for the collection and expenditure of revenue rested with the Central Government, and the Provincial Governments had no powers of taxation. This type of centralised administra-

tion, with little or no incentive to economy on the part of the Provincial Governments, suffered from many disagreeable features, resulting in frequent wrangling between the Central and the Provincial Governments regarding the allocation of grants for the requirements of the latter. It was, however, with the introduction of the Montagu Chelmsford Reforms that great and important changes were witnessed in the system of the financial management of the country. By the Reforms of 1921-22 when the Government of India Act, 1919, came into general operation, a clear demarcating line was drawn up between the finances of the Government of India and that of the Provinces. Under the new or present system of financial administration the Provinces have been allocated different sources of revenue from those of the Central Government, and have acquired a good deal of financial autonomy inasmuch as they have been now empowered to raise loans on the security of their revenues for purposes of general improvement and to initiate new taxative measures in certain cases with the sanction of the Governor General in Council. Each province now maintains its own finance department with a Finance Member who almost enjoys a full liberty in the management of his provincial revenues.

Classification of Indian Revenues

Indian revenues can be conveniently classified according to the taxing authorities as found in India at the present time. They are (a) the Central Government, (b) the Provincial Governments, and (c) the various Local Bodies such as Municipalities, District Boards, and Port Trusts.

(A) Central Finance

Central finance consists of the sources of revenue conferred by the Reforms Act of 1919. The Central Government maintains the most wide and extensive powers of taxation in India and has reserved for itself the sources of revenue which are elastic such as customs and income-tax which bring into the coffers of the Central Government increased revenues with an increase of wealth and population, whereas the sources of revenue assigned to the Provincial Governments are insufficient

and more or less static, considering their rapidly expanding requirements. To save the Provincial Government from financial ruin, the Otto Niemeyer Report proposed immediate financial assistance to certain provinces partly in the form of cash subventions, partly in the form of cancellation of some of their debts and partly by distributing to the jute growing provinces of a further 12½ p.c. of the jute tax. As regards the provincial share of the proceeds from income-tax, the Committee recommended that half of the proceeds should be distributed among the provinces. The revenues of the Central Government are not only derived from taxes but also from non-tax revenue sources.

Central Budget for 1942—43

These are war times and to meet them, there should be an inevitable expansion in all the spheres of Government administration. Several defence schemes need immediate handling to improve India's coastal, air and land defences. This will involve a large increase in India's share of the war bill.

Introducing the central Budget for 1942-43, the Finance Member disclosed a deficit of Rs. 17 crores for the current year and summarized the finance position for the coming year as follows :—

Civil expenditure	Rs. 54,07	lakhs
Defence	Rs. 133,00	„
	—————	
Total	Rs. 187,07	„
Total Revenue	Rs. 140,00	„
	—————	
Deficit	Rs. 47,07	„

While stressing the need for fresh taxation, the Finance Member said, "the scope for what is called soaking the rich has now practically disappeared, and further advances in taxation must inevitably take the effect of calling for greater sacrifices from the middle classes, the lower middle classes and even the poor."

Fresh Taxation

(a) The entry of Japan into the war with the consequent dislocation of shipping in the Pacific customs

receipts have dropped sharply To meet this an emergency surcharge of $\frac{1}{2}$ on all customs import duties has been levied The only exception will be petrol, the tax on which is being increased separately from 12 annas to 15 annas a gallon and raw cotton on which the duty has just been doubled The excise duties on kerosene and silver will be made equal to the import duties now leviable

(b) The posts and telegraphs rates have been altered The ordinary letter rate has increased from $1\frac{1}{4}$ anna to $1\frac{1}{2}$ annas and the minimum rate for an ordinary telegram and express telegram has been raised to 12 annas and Rs 1 4 0 respectively There will also be increases in telephone rentals and the surcharge on trunk call fees will be raised from 10% to 20%

c) The income tax surcharge which has been proposed runs from 6 pies in the rupee on the lowest slab to 1 anna and 3 pies in the rupee on the highest slab Similarly, the surcharge on the rates of super tax are equal to a 50% increase while the corporation tax is raised to $1\frac{1}{2}$ annas in the rupee As regards the Excess Profit Tax, it is proposed to retain the existing rate of $66\frac{2}{3}\%$

The total additional revenue from all these proposals is estimated at Rs 12 crores, leaving a deficit of Rs 12,07 lakhs to be covered by borrowing This would in normal times rightly be regarded as a formidable state of affairs but at the present time it must be viewed against the background of India's war effort and the increase in the national income resulting from the extensive development of India's resources

Chief Sources of Revenue of the Central Government

The following is a table of the principal heads of revenue enjoyed by the Central or Imperial Government in India

GENERAL STATEMENT OF THE REVENUE

Budget Estimates for 1941-42

<i>Principal Heads of Revenue</i>	<i>In thousands of rupees</i>
Customs	35,11 00
Central Excise Duties	12,10 00

Corporation Tax	...	...	...	12,62,00
Taxes on Income other than Corporation Tax	...	...	...	23,00,00
Salt	...	...	...	8,30,00
Opium	...	...	...	52,85
Other Heads	...	...	...	1,10,97
Total—Principal Heads				92,76,82
Railways : Net Receipts (as shown in Railway Budget)	...	...	...	41,09,42
Irrigation : Net Receipts	...	...	...	84
Posts and Telegraphs : Net Receipts	...	...	...	2,09,53
Debts Services	...	...	...	61,29
Civil Administration	...	...	...	1,12,71
Currency and Mints	...	...	...	2,21,44
Civil Works and Miscellaneous Public Improvements	...	...	...	28,45
Miscellaneous	...	...	...	1,34,67
Defence Services	...	...	...	44,14
Contributions and Miscellaneous Adjustments between Central and Provincial Governments	...	...	...	...
Extraordinary Items	...	...	...	3,05,52
Total Revenue				1,45,04,83
Deficit				13,84,55
Total				1,58,89,38

The major portion of the revenues, is derived from taxation like customs, income-tax, etc., yet the revenues accruing from commercial enterprises undertaken by the Government of India under its own control and management are by no means negligible. A brief comment pointing out a few salient characteristics of the main items of Central revenue seems worth consideration.

1. *Customs.* Customs duties are levied on the import and export of certain commodities according to the rates as prescribed in the tariff schedule framed by the Government of India. A list of such duties in a country is called its 'tariff.' Customs duties bring into the State treasury about more than one-third of the total revenue. They are not only a productive but an elastic and growing source of revenue. It may be said that before the War, the Indian Tariff was Revenue Tariff, that is, the import

and export duties on different commodities and their frequent variations in times of financial stringency were solely governed by revenue considerations. But as a result of the policy of 'discriminating protection' as recommended by the Fiscal Commission Report, protective duties on iron and steel products, paper, cotton, piece goods sugar, etc., have been imposed by the Government of India. The customs tariff consists of *ad valorem* and specific duties. A duty is *ad valorem* when the tax is a certain percentage of the value of the commodity, it is specific when the tax is levied according to the quantity of the commodity as measured by its number, weight or volume. Though the tariff in India is an *ad valorem* tariff, certain commodities such as salt, kerosene oil, spirits, etc., are subject to specific duties. Customs duties today amount to heavy taxation on consumption which falls heavily on poor people.

2 *Income tax* Income tax is a direct tax and it is the most equitable, economical, productive and elastic source of revenue. Income tax in India is levied on annual incomes of both individuals and companies. The progressive or graduated principle in the assessment of income tax is secured by exempting incomes below a certain minimum and by charging high rates of taxation on larger incomes. In 1916 the scale of progression was introduced, and incomes below Rs 2000 per annum were exempted from taxation until 1932 when the taxable limit was lowered to Rs 1000 to enable the Government of India to meet the budget deficit caused by the dislocation of economic and industrial factors in the wake of the world economic depression. Again from 1936 incomes below Rs 2000 per year were exempted from taxation.

The Income tax (Amendment) Act 1939 has been designed to prevent evasion of income-tax, to stop up the loopholes and to give some relief to many poor taxpayers. The Act has introduced the adoption of the 'slab' system instead of the 'step' system from 1939. Income tax department's vigilance saves the Exchequer Rs 320 lakhs in 1939-40, but the tendency on the part of the assesseees to evade tax by adopting all sorts of methods continues unabated.

With effect from April, 1942, the Government of India has raised all the income-tax and super-tax rates.

(a) Persons having an annual income exceeding Rs. 1500 but not exceeding Rs. 2000 will become liable to tax at 6 pies in the rupee on the amount by which the total income exceeds Rs. 750. They can, however, discharge their liability to taxation by depositing $1\frac{1}{4}$ times the tax in the Post office Defence Savings Bank. These sums will earn an interest of $2\frac{1}{2}\%$ but cannot be withdrawn till one year after the end of the war.

(b) To give some relief to persons having incomes not exceeding Rs. 6,000 an amount of the tax equal to $\frac{1}{2}\%$ of the assessee's income will be funded for repayment to him after the end of the war.

(c) Incomes below Rs. 1,500 are not taxed.

Incomes between Rs. 1,500 to Rs. 5,000 at 15 pies in the
rupee

Next Rs. 5,000	at 2 annas in the rupee
Next Rs. 5,000	at 3 annas 2 pies in the rupee
Next Rs. 5,000 and above	at 3 annas 9 pies in the rupee

(d) Rate for companies and local authorities, whatever the income may be, will be 3 annas 9 pies in the rupee.

Super-tax

(a) Assesses other than companies :—

First Rs. 25,000	..	No tax	
Next „ 1,0000	..	1 anna 6 pies	in the rupee
Next „ 20,000	..	3 annas	„ „
Next „ 70,000	..	4 „ 6 pies	„ „
Next „ 75,000	..	6 „ ×	„ „
Next „ 150,000	..	7 „ 6 pies	„ „
Next „ 150,000	..	9 „ ×	„ „
Balance of income	..	10 „ 6 pies	„ „

(b) Companies and local authorities :—

$1\frac{1}{2}$ annas in the rupee on the whole income (No exempted slab).

From the above rates we can easily find out that the incidence of the tax proceeds in a fairly even progression from less than 2% at one end of the scale to 85% at the

other end of the scale on an income of Rs 30 lakhs and above a year

3 *Salt tax and opium revenue* The salt tax is an old tax being inherited by the British Government from its predecessors. Before 1882 the rate of the salt duty varied from province to province. In that year, it was made uniform throughout India at Rs 2 per maund, but was raised to Rs 2.8 in 1888. From 1888 to 1931 the rate of the salt duty underwent many changes, and on the 30th September, 1931, it was fixed at Rs 1.9 per maund. Economically the salt tax is inequitable and inconvenient and ethically it is indefensible in the Indian fiscal system. Since salt is a necessity of life, the consumption of which is regarded as extremely desirable from the point of view of the physique of the people, any tax on it is sure to impose proportionately a very heavy burden on the poorer classes. Its immediate reduction or extinction, if it is possible, is long overdue.

Opium is a fiscal monopoly of the Government of India. At one time huge quantities of opium used to be exported to China, the revenue from this source being considerably large. But as a result of an agreement entered into by the Government of India with China, the former decided to stop all exports of opium to China, this revenue has fallen considerably at present.

4 *Excise duty on matches and sugar* An excise duty of Re 1 per gross boxes containing on an average 40 matches each and Rs 2 per gross boxes containing about 80 matches each was levied in the year 1935-36. In March, 1941 the duty was raised to Rs 2/8/- per gross boxes containing not more than 50 matches each. This tax falls very heavily on the poor people of India and it is hoped that taxes on such necessities of life would be avoided. An excise duty of Rs 1/5 per cwt on factory produced sugar and As 10 per maund on Khandasari sugar was levied to recoup the losses sustained due to the fall in the import duty on sugar. The excise duty on sugar has been raised to Rs 3 per cwt in March 1940. The duty on Khandasari sugar has been reduced to As 8 per cwt. It is assumed that this will not lessen in any way the protection afforded to the

Indian sugar industry. Part of the proceeds of this duty will be utilized for the purpose of assisting the organization and operation of co-operative societies among the cane growers.

5. *Railways and Irrigation.* The receipts from non-tax revenue sources also swell the revenues of the Central Government. Railways and canals are commercial undertakings providing a good source of profit to the Government.

6. *Posts and Telegraphs.* They are commercial services undertaken by the Government of India with a view to provide cheap and convenient service. But mainly due to economic depression receipts from them have fallen like those from the railways and canals. They are incurring regular losses, in spite of strict economy in expenditure.

Chief Heads of Expenditure of the Central Government. The principal items of expenditure of the Central Government are as follows :—

GENERAL STATEMENT OF THE EXPENDITURE

(Budget Estimates for 1941-42)

<i>Principal Heads of Expenditure</i>	<i>In thousands of Rs.</i>
Direct Demands on the Revenue ..	4,35,87
Railways: <i>Interest and miscellaneous charges</i> ..	30,91,00
Irrigation: <i>Interest and miscellaneous charges</i> ..	9,71
Posts and Telegraphs ..	69,70
Debt Services ..	12,05,75
Civil Administration ..	13,11,43
Currency and Mint ..	97,21
Civil Works ..	3,75,82
Defence Services ..	84,56,66
Miscellaneous ..	2,82,25
Extraordinary Items ..	2,49,50
Contributions and Miscellaneous Adjustments between Central and Provincial Governments ..	3,04,47
Total expenditure	1,58,89,37

1. *Direct demands for the cost of collection of revenues.* They represent the expenditure incurred in collecting

revenues from customs, income tax, salt, opium, land, excise, stamps, etc. This item should be kept as low as possible by adopting various measures of economy in the cost of collection of revenues.

2 *Commercial services* This item includes expenditure chargeable to the commercial services. The expenditure on railways is represented by interest and miscellaneous charges on account of capital borrowed for the construction and working of railways. Posts and telegraphs, and irrigation works administered by the Central Government are other principal heads which account for the expenditure under commercial services.

3 *Debt charges* A large amount of interest has to be paid annually by the Government of India on the debt inherited from the East India Company, and the loans raised by the Central Government, now and then, for the development of railways and irrigation projects. The total debt is classified into productive works debt and ordinary or unproductive debt, and about eighty per cent. of the national debt is estimated to have been taken for productive purposes. The national debt seems to be large, yet the interest chargeable to this account is not felt as burdensome for the State derives a large revenue from the undertakings financed by such loans. A striking feature of the public debt of India is that a large portion of it has been raised through sterling loans, as a result of which, a considerable amount of interest is now sent to foreign investors.

4 *Civil administration* This item has been an enormous increase in public expenditure specially since the introduction of the Reforms. The expenditure under this head represents the salaries of the staff of the Central Government and the minor provinces—Delhi, Ajmer-Merwara, Coorg and Baluchistan—which are directly administered by the Government of India. It also includes expenditure on political department, scientific research, educational and medical institutions and other services included in the list of central subjects. It is pointed out by many that Indian administration is the costliest in the world and the existing scale of salaries, allowances, leave concessions and pensions given to the

officers of the Indian Civil Service is unduly high, considering the economic resources of the country. By reducing all unnecessary expenditure much saving can be brought about in this item of expenditure.

5. *Military charges.* This head includes expenditure on army, navy, air force, strategic railways, harbours and defence works maintained in India for keeping the country secure from foreign encroachments. This item takes away the lion's share of India's revenues and it has been invariably subjected to all sorts of criticism by the critics of the Government. In India, the percentage of expenditure on defence is the heaviest in the world. Even Sir Walter Layton, the Financial Assessor of the Simon Commission regarded the expenditure on this head as too excessive in view of the poverty of the country and its low capacity for bearing the burden of taxation. It is suggested that this enormous expenditure can be curtailed considerably without losing the efficiency of the military services, provided the Indianization of the Army together with other possible economies in expenditure is effected at an early date, but the war has changed the entire situation. The Defence budget for 1942-43 amounts to Rs. 133 crores and is likely to increase further.

(B) Provincial Finance

As the Reforms Act of 1919 aimed to introduce responsible government of a limited character in the Provincial Governments, the relationship of subordination of Provincial Governments to the Central Government in matters connected with public revenue and expenditure was broken and Provincial Governments were for all practical purposes made financially independent of the central revenues. A clean-cut was made between the revenues apportioned to the Central and Provincial Governments.

The chief heads of 'Provincial Revenues' are Land Revenue, Excise, Stamps, Forests, Registration, and Irrigation. Besides these, they also consist of income derived from Debt Service and Civil Administration. The revenue yield from these various sources varies in different provinces according to their economic condition and industrial progress. Thus, land revenue, which is

an important head of revenue in the United Provinces, Bombay, Madras, the Central Provinces and Assam, occupies comparatively a less prominent place in the provincial revenues of Bengal because the land revenue is fixed in perpetuity. As we have already said, the Central Government appropriates all the elastic sources of revenue of India leaving only those heads to Provincial Government which are highly inelastic and decreasing year after year. The Provincial Government have to look after all the nation-building departments such as education, agriculture and industries, sanitation and public health, for the expansion and development of which the entire country is clamouring. The present system of allocation needs to be revised particularly the item of Income-tax of which a major portion should go to the Provinces.

Chief Sources of Revenue of the Provincial Governments

1. *Land Revenue.* It is the biggest source of income of the Provincial Governments. In spite of an increase in the amount of land revenue it cannot be relied upon as an elastic source of revenue. On the other hand, it, not infrequently, proves an uncertain source of revenue in times of the failure of the Monsoons when remissions and suspensions of land revenue have to be made by the Government, entailing a heavy loss of revenue. But there seems to be no possibility of further increase owing to a heavy fall in the prices of agricultural products. It is pointed out by critics that rigidity of land revenue collection without any due regard to the prices of agricultural products and the yield of the land which shows variations from year to year according to the amount of rainfall and other natural factors affecting agriculture, leads to many an adverse economic effects on the peasantry of India. Again, it falls more heavily on the poorer landholders than on the rich ones because of the complete absence of progressive principle in land revenue assessment. It does not satisfy many of the canons of taxation.

2. *Excise.* Excise is a tax levied on commodities produced within a country. The excise revenue is obtained from the sale and manufacture of intoxicating liquors, hemp, drugs, toddy and from the fees for their sale.

General Statement of Revenue and Expenditure of the United Provinces for 1941-42

Income	In Lakhs of Rs.	Expenditure	In Lakhs of Rs.
Other Taxes on Income	65		
Land Revenue ...	6,27	Cost of Collection (Direct Demand on Revenues) ...	1,43
Excise ...	1,28	General Administration	1,42
Stamps ...	1,35	Jails and Police ...	1,24
Forests ...	65	Education ...	2,23
Registration ...	9	Irrigation ...	1,19
Irrigation ...	1,86	Administration of Justice ...	71
Administration of Justice ...	13	Agriculture ...	83
Jails and Police ...	18	Medical and Public Health ...	39
Education ...	15	Industries and Co- operation ...	30
Medical and Public Health ...	9	Civil Works and Roads	27
Agriculture ...	13.6	Interest, Sinking Fund and Debt ...	73
Motor tax ...	12.5	Deposit and Advances	68
Industries and Co- operation ...	9.4	Capital Expenditure charged to Revenue	1,81
Civil Works ...	27	Miscellaneous ...	2,33
Interest and Debt Service ...	17	Total	15,56
Deposit and Advances	76.5	Closing balance ...	1,0
Miscellaneous including Subsidised Railways	120	Grand total ...	17,17
Total ...	15,36		
Opening balance ..	1,81		
Grand total ...	17,17		

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**General Statement of Revenue and Expenditure of the
C P and Berar for 1941-42**

Income	In Lakhs of Rs	Expenditure	In Lakhs of Rs
Other Taxes on Income	21	Cost of Collection (Direct Demand on Revenues)	67
Land Revenue	250	General Administration	70
Excise	60	Jails and Police	68
Stamps	40	Education	54
Forests	54	Irrigation	7
Registration	5	Administration of Justice	26
Irrigation	10	Agriculture	15
Administration of Justice	6	Medical and Public Health	23
Jails and Police	4	Industries and Co operation	8
Education	7	Civil Works and Roads	51
Medical and Public Health	3	Interest and Sinking Fund	43
Agriculture	4	Debt Deposit and Advances	
Motor tax	6	Capital Exp charged to Revenue	3
Industries and Co- operation	1	Extraordinary Exp	2
Civil Works	10	Miscellaneous	73
Interest and Debt	4		
Debt, Deposit and Advances	5		
Miscellaneous	20		
Total	510	Total	510

General Statement of Revenue and Expenditure of the Punjab for 1941-42

Income	In Lakhs of Rs.	Expenditure	In Lakhs of Rs.
Other Taxes on Income	36	Cost of Collection (Direct Demand on Revenues) ...	91
Land Revenue ...	2,97	General Administra- tion ...	1,21
Excise ...	1,6	Jails and Police ...	1,70
Stamps ...	68	Education ...	1,66
Forests ...	31	Irrigation ...	1,63
Registration ...	8	Administration of Justice ...	53
Motor tax ...	14	Agriculture ...	67
Irrigation ...	4,92	Medical and Public Health ...	78
Administration of Justice ...	9	Industries and Co- operation ...	55
Jails and Police ...	7	Civil Works and Roads	1,40
Education ...	21	Interest and Sinking Fund ...	15
Medical and Public Health ...	17	Debt, Deposit and Advances ...	13
Agriculture ...	30	Capital Exp. charged to Revenue ...	
Industries and Co- operation ...	16	Extraordinary Exp. Miscellaneous ...	16 1,80
Civil Works ...	39		
Interest and Debt Service ...	4		
Deposits and Advances	16		
Miscellaneous ...	1,17		
Total ...	13,28	Total ...	13,28

**General Statement of Revenue and Expenditure of the
Bombay Province for 1941-42**

Income	In Lakhs of Rs.	Expenditure	In Lakhs of Rs.
Other taxes on Income	89	Cost of Collection (Direct Demand on Revenue)	1,74
Land Revenue ...	3,33	General Administration ...	83
Excise ...	2,06	Jails and Police ...	1,79
Stamps ..	1,29	Education ...	2,06
Forests ..	41	Irrigation ...	42
Registration ...	14	Administration of Justice ...	66
Irrigation ..	38	Agriculture ...	24
Administration of Justice ..	16	Medical and Public Health ...	90
Jails and Police ...	14	Industries and Co-operation ...	21
Education ...	17	Civil Works and Roads	1,27
Medical and Public Health ...	53	Interest, Sinking Fund and Debt ...	1,74
Agriculture ..	9	Miscellaneous ...	1,66
Motor tax ...	42		
Industries and Co-operation	9		
Civil Works ...	58		
Interest and Debt ...	68		
Miscellaneous ...	2,21		
Total .	13,57	Total ...	1,53
Opening balance	41	Closing balance ...	45
Grand Total	13,58	Grand total ...	13,98

licences. Excise duties vary from province to province. The income from this item has been stationary or diminishing in some of the provinces due to a restrictive policy of the Government and the increasing prejudice being manifested against the consumption of drugs and liquors.

3. *Stamps.* Stamp revenue is derived from two classes of stamps, judicial or court-fee stamps and non-judicial or commercial stamps.

4. *Forests.* They are an important asset of the Provincial Governments. The revenue is obtained from the sale of timber and other forest produce, grazing fees and licence fees for permission to extract for sale firewood, charcoal, bamboos, canes and minor forest produce. There are prospects of securing a good revenue from forests, if they are properly conserved and exploited.

5. *Registration.* The revenue is mainly derived from registration according to the value of the documents registered. The registration is compulsory in the case of certain documents relating to gifts and transactions of immovable property, and optional in the case of others.

6. *Irrigation.* Most of the canals are under the direct control and management of the Provincial Governments. The revenue is derived from the water-rate imposed for the water supplied to the cultivators for irrigating their crops. The net profits derived from irrigation constitute an important source of revenue in the Punjab, Madras and the United Provinces.

7. *Schedule taxes.* These are taxes which the Provincial Governments may impose at their discretion since the Reforms, without the previous sanction of the Governor-General.

Chief Heads of Expenditure of the Provincial Governments

The expenditure of the Provincial Governments is apportioned into two heads corresponding to the "reserved" departments and transferred departments of the Government. On the "reserved" side the chief items of expenditure are Direct Demands on the Revenue, General Administration, Police, Jails and Justice. On the "transferred" side the

chief items of expenditure are Education, Medical Relief, Public Health, Civil Works, Industries and Agriculture.

1 *Direct demands on revenue* This item represents the cost of collecting land revenue, excise, forests, stamp duties and registration fees. In the United Provinces this item represents about 10 per cent of the total expenditure and needs reduction by observing strict economies, in many directions.

2 *General Administration* The expenditure under this head has increased enormously with the inauguration of the Reforms. It implies expenditure chargeable to headquarter's establishment of the province, the revenue establishment and a part of the cost of magistracy. A considerable economy may be effected by bringing down the scale of salaries, allowances, pensions, etc., granted to superior staff and by other possible economies.

3 *Police* Recently, there has been witnessed a rapid increase under this head due to the increase in crimes and other terrorist activities. Although a reduction in police expenditure is greatly desirable, in the fervour of economy, the efficiency of police force for ensuring the peaceful state of the country should not be lost sight of.

4 *Education* The expenditure on this item has of late shown some improvement but it is extremely inadequate considering the vast illiteracy of the people. Means should be devised, somehow or the other, to increase the revenue or reduce expenditure in other directions so that larger funds may be allocated to this necessary head, for bringing enlightenment among the masses.

5. *Medical relief and public health* For preventing the corroding influence of the destructive diseases and improving the general physique of the people the importance of this head cannot be over-emphasized. Considering the plethora of diseases and the notoriously unhealthy and insanitary tracts in the country, the expenditure on this department needs an immediate expansion.

6 *Industries* The Provincial Governments are generally averse to spending any substantial amount on

this head as any increased revenue, mainly due to the efforts and monetary sacrifices of the Provincial Governments, will go to the Central Exchequer in the shape of revenue realized from income-tax head.

(7) *Agriculture.* Considering the importance of agriculture, the expenditure under this head is ridiculously small and whatever it is, a large portion of it is frittered away in the absence of any definite and steady agricultural policy and co-operation between the different allied departments. As soon as the finances permit greater resources should be made available for agricultural developments, and the amount should be spent with definite view to bring about amelioration in the hard-pressed conditions of the peasantry.

(C) Local Finance

Besides the Central and Provincial Governments, there are various public bodies like municipalities, district boards, local boards, village unions, and port trusts which are usually known as Local Bodies. They have been also empowered to raise revenue from taxes or rates for the discharge of functions committed to their control and supervision. These local bodies are subject to the authority of the Provincial Government in a variety of of ways.

The importance of local finance in modern times of growing political consciousness and rising spirit of nationalism has been recognized in all the progressive countries of the world. Mainly as a result of the spread of enlightenment among the masses and their keen grasp of a sense of consciousness in respect of their rights, a demand for Self-Government has persistently arisen everywhere. With the growth of rising democracies and the assumption of increased functions by the Central and Provincial Governments, the need for relegating some of the functions to the local bodies has been definitely recognized for securing efficiency in public administration and sufficiency in public services. It is essential that these local bodies should be given a free hand in tapping some new sources of revenue. Local opinion is strongly in favour of indirect as opposed to direct taxation for municipal purposes. Some of the Boards have

recently imposed a tax on circumstances and property. The U P Government has passed the Motor Vehicles Taxation Act in 1936, to realize money to pay grants to local authorities for construction, improvement and maintenance of roads.

The number of municipalities is about 780 in India and their total income averages Rs 38 crores. The total income of all District Boards and Port Trusts is Rs 16 crores and Rs 15 crores respectively.

The Functions of Municipal Boards

The municipalities in India are entrusted with various duties and diverse functions connected with the Town Government. The functions are classed under four main heads—(i) Public Safety, (ii) Health, (iii) Convenience and (iv) Instruction. There are certain obligatory duties such as lighting, watering and scavenging of public roads and streets, prevention and control of epidemics by improving the general sanitation of the town, public vaccination and inoculation whenever small pox, cholera or plague breaks out, checking of public nuisances, protection against conflagrations, regulation and abatement of offensive or injurious trades and practices, removal of refuse from public places, construction and maintenance of streets, roads, culverts, buildings, markets, slaughter houses, latrines, drainage and sewage works, tanks, drains and wells, establishment of public hospitals and dispensaries and provisions of primary education.

Certain duties are optional. If their finances permit, municipalities may undertake the laying out, construction and pavement of new streets and roads. For the public recreation, amusement, enlightenment and for the beautification of the town at large they may provide public parks, gardens, gymnasiums, swimming baths, play-grounds, museums, libraries and other public buildings. They may also undertake other public utility services, organize exhibitions, collect vital statistics, provide maternity homes and compulsory education.

Sources of Revenue of Municipal Boards

The principal sources of municipal revenue may be classified under five heads.

1. *Taxes and Rates.* Under this item the income is obtained from taxes on land and buildings, animals and vehicles, professions, trades and callings, tolls on roads, ferries, and octroi duties on articles of consumption entering the town. Rates are also imposed in return for the services rendered such as (i) a water-rate, (ii) a lighting rate, and (iii) conservancy rates.

2. *Realizations under special Acts.* This head includes income from pounds, hackney carriages, licences for the sale of spirits and drugs and other sources.

3. *Revenues from municipal property and power.* A major portion of revenue is raised from rents of lands, houses, sarais (rest-houses) under municipal possession, from the sale proceeds of lands and produce of lands, from municipal markets and slaughter-houses, from conservancy receipts, from educational and medical fees, from fines and registration fees and from licence fees for carts.

4. *Grants and Contributions.* The income of municipalities is often supplemented by grants from the provincial revenues.

5. *Miscellaneous.* This item implies income from extraordinary sources, such as interest on municipal investment, etc. Municipal boards also borrow funds from the Provincial Government or in the open market on the security of their revenues.

District Boards and their Functions

The duties and functions entrusted to district and local boards in rural areas are practically the same as those of the municipalities in urban areas, allowing for the different environments and requirements of town and country. Their main duties may be classified thus:—

1. The management and supervision of all property vested in the District Board.
2. The construction, maintenance and improvement of public roads and other means of communication.
3. The establishment and maintenance of hospitals, dispensaries and rest-houses.
4. The provision of drainage and water supply.

**Statement of Income and Expenditure of a
Municipal Board**

Heads of Income	Rs.	Heads of Expenditure	Rs.
1. Municipal Rates and Taxes—		1. General Administration and collection charges—	
Octroi duties	3,26,128	General administration	92,391
Taxes on animals, lands, buildings and vehicles ..	58,172	Collection of taxes	22,530
2. Realizations under special Acts—		Collection of tolls	19,941
From pounds and hackney carriages	5,321	Re-tunds	34,004
From Licences for the sale of spirits	1,565	2. Public safety—	
From other sources	5,137	Lighting	42,805
3. Revenue from property and power—		3. Public Health and convenience—	
Rents of lands, houses, sarais	16,532	Water supply	1,533
Sale of lands and produce	4,312	Drainage	19,562
Conservancy receipts	11,335	Conservancy	32,530
Fees from market and slaughter houses	3,267	Health (Officers, etc.)	24,345
Copying fees	1,202	Hospitals and Dispensaries	16,905
License fees on carts	4,503	Other charges	15,373
Fines	7,905	Public works and Roads	67,531
Premium on loans	1,361	4. Public Instructions	
4. Grants and contributions—		Schools and Colleges	31,482
From Government for education	17,732	Contributions	9,505
5. Miscellaneous—		Libraries, museums, etc.,	5,472
Other items	8,035	5. Miscellaneous—	
6. Extraordinary debt and deposits—		Printing and law charges	7,340
7. Opening Balance	12,821	Other items	
Total	4,92,700	6. Extraordinary debt and deposits	12,532
		7. Closing Balance	36,946
		Total	4,92,700

5. The improvement of general sanitation.
6. The construction and maintenance of markets.
7. The provision of education.
8. The planting and preservation of trees on the roads under the control of the District Board.
9. The provision of relief during periods of famine and scarcity.
10. Besides, these other functions, such as the organization of public fairs, agricultural shows, industrial exhibitions, construction of embankments and the supply of water for irrigation facilities may be also undertaken.

Sources of Revenue of District Boards

The major portion of revenue of district boards consists of rates and cesses levied upon agricultural land in addition to land revenue. They are also empowered to impose taxes on companies and professional men. Other sources of income are pound receipts, tolls on vehicles, ferries and bridges. A good deal of income consists of contributions from the Provincial Government either as annual grant-in-aid for particular services, or capital sums for specific work of construction. Receipts from markets, shops, and other properties considerably swell the revenues of the district boards.

Progress of Local Bodies

There are at present about 800 municipalities in British India with something over 2,10,00,000 people within the limits of these municipalities—roughly 710 have a population of less than 50,000 persons. The number of district boards in the country comes to about 207 with 584 sub-district boards besides 455 Union Panchayats in Madras. The total annual income of municipalities amounts to Rs. 15 crores, whereas that of district boards stands about Rs. 12·5 crores.

It is held by many that the progress of local bodies has been very slow and disappointing. It is contended that the type of administration and activities of the local bodies of progressive countries is conspicuous by its absence in India. The sanitary administration is inadequate and municipal cities represent a scene of haphazard growth without any sense of civic beauty and

Statement of Income and Expenditure of a District Board

Heads of Income	Rs.	Heads of Expenditure	Rs
1. Rates and cesses on land	60,000	1. General Administration and collection charges	23 875
2. Taxes—taxes on circumstances and property	25,050	2. Education—administration, inspection and training	72 893
3. Receipts from ferries and bridges	11 575	3. Agriculture and arboriculture	12 215
4. Government grants for education, medical, public health and roads	70 000	4. Refunds of taxes, etc.	2 345
5. Receipts from public health, contributions, etc.	5,000	5. Public Health and medicine	29 141
6. Educational fees and other contributions	12,050	6. Superannuation other than educational, pensions and provident fund	4 500
7. Receipts from markets, shops, and other properties	11,360	7. Public works and repair	42 880
8. Receipts from fairs and exhibitions	8,213	8. Fairs and exhibitions	7 945
9. Income from pounds and veterinary	4,717	9. Pounds and veterinary	6 749
10. Miscellaneous, sale of old stores, grass and miscellaneous fines, etc	9,719	10. Miscellaneous, famine relief, law and printing charges, grants and donations, etc.	18 547
TOTAL	2,17,684	TOTAL	2 21,080
Opening Balance	11,315	Closing Balance	7 919
GRAND TOTAL	2,28,999	GRAND TOTAL	2,28,999

APPENDIX 1

IMPORTANT ECONOMIC AND INDUSTRIAL WAR MEASURES

"On Active Service," "Grow more food," "National needs must come first," "Travel only when you must," "Petrol Rationing," "Use less paper," "Economy Drive" and such other countless slogans blazoned in all conceivable manners at each and every place of importance testify to the one important and incontestible fact that the impact of the second world war, though the actual warfare is still beyond the Indian frontiers, on the economic, commercial and industrial structure of the country has been so great as to demand the entire resources of the country in the best possible manner for the successful prosecution of the war. Two and a half years of war has changed the economic face of India and though India still remains essentially and primarily an agricultural country, she now manufactures diverse articles which were never before manufactured here and to a considerable extent now fulfils, excepting motors, air craft and big ships, her war requirements.

Due to the immense potential resources of the country and an inexhaustible supply of man power for the fighting forces and also because the country is being kept immune so far from an enemy threat, and due to cutting off of the supplies from and to the Colonies and Dependencies in the Far East, India, with the rapid progress she is now making in the industrial field, has now become the arsenal of the East. A variety of measures have been adopted by the Government of India for the important problem of keeping the vast army, stationed at the outer bastions of India for defending the country and the strategic points of the Empire, being regularly and freely supplied with the sinews of war. In order to

keep up the morale of the civil population and sustain the health and spirit of the people as also to provide them with enough necessities of life the Government of India have taken numerous steps.

The war has brought us many onerous responsibilities and has pointedly drawn our attention to the task of speeding up and extending the industrial development of the country. The colossal war demands from various countries which have been successfully met by the Indian manufacturers have demonstrated in a practical manner that the existing industries of India are on a road leading to a high state of efficiency and that given the necessary facilities India in a very short time may become second to none amongst the industrial countries of the world.

It is a well-known principle of Economics that war accelerates trade and oils the wheels of industry. The first repercussions on the outbreak of war are manifest in the upward trend of prices; wild rumours regarding the vicissitudes of war lead to a terrible amount of speculation; upsetting the market equilibrium; with the rise in prices industry begins expanding its activity; agriculture sets in a prosperous period and larger cultivation of crops begins and trade becomes more brisk.

In the limited space, it is difficult to review the growth of trade, commerce and industry in India since the outbreak of war, but a very brief description is given below in order to apprise the student with the important economic and industrial measures adopted, and schemes initiated, by the Government of India for meeting urgent war needs in various theatres of war for its successful conclusion.

1. Produce more Food and other Materials

The present armageddon is very much different from all previous wars inasmuch as colossal amount of destruction of stores and equipment not only earmarked for the armed forces but also necessary to keep body and soul of the civil population together, and wholesale desolation of towns and cities, can be effected by an enemy, several hundred miles away from the actual theatres of warfare, by aerial bombardment, besides the

loss of war material sustained in the torpedoing and sinking due to enemy action of supply and transport vessels. As such, the present war requires greater productive efforts over and above the military and civil requirements during the war.

Food is a weapon against the enemy just as powerful as munitions, and food will continue to be a weapon in all efforts towards ensuring a more orderly, prosperous and peaceful world. In a total war like this, the possibility of food shortage is to be avoided at all costs by all practical means because of the demoralization and discontent it may create in the civil population and also because an army marches on its stomach.

The variety of raw materials required by the war industries may differ widely from normal peace times output. Besides the raising of a variety of raw materials required for the war, an energetic drive is also now taken for the production of more food crops in view of the recent food shortage experienced actually in some of the provinces of India. The present food shortage problem is very much different from that experienced at any previous time which was either due to scarcity or general failure of crops. The present food shortage has been caused due to the growing demands for wheat for the fighting forces inside and outside the country, the complete cessation of rice imports from Burma to the extent of over $1\frac{1}{2}$ million tons annually representing about 3% of the total food production of the country, the lack of quick transportation of foodstuffs from the regions of plenty to those of scarcity as the railways are very heavily overworked especially at the present time in military transports, and lastly due to the withholding of stocks of food grains for sale by the traders in the expectation of securing better prices.

The Government of India realizing the growing food shortage convened a Food Production Conference in April 1942 at which were invited the representatives of Provincial and States Governments to discuss and formulate a practical programme for preventing any food shortage in any area during the war and launching a "Grow More Food" campaign.

It will be better to explain here that the "Grow More Food" campaign does not contemplate any large schemes of farming involving large capital outlay but it is concerned more with the immediate task of expanding area and output of foodstuffs which are deficient in supply in the country by curtailing the area under commercial crops such as short-staple cotton, groundnuts etc., which have now become uneconomic due to the inavailability of facilities for their exports to other countries.

It is authoritatively realized that expansion of acreage under food crops in lands which have become surplus for the production of commercial crops will not lead to any fall in prices of foodstuffs but will help to build up reserves of food stocks against the rainy day. The intention is to transfer some lands of doubtful economic productivity to the cultivation of food grains and to plan production of food crops in such a manner as to bring about regional self-sufficiency by bringing under cultivation even marginal lands and increasing yield by intensive cultivation with the application of better manures and improved methods of cultivation. The question of introducing new economic crops in India has also been discussed.

The responsibility of conducting "Grow More Food" campaign has been entrusted to Provincial and States Governments whose duty will be to ascertain the position in respect of deficits of food grains likely to be experienced in their respective regions and then to devise effective ways and means for inducing the cultivators to make good the supply of deficient food grains. The Government of India are also considering the question of guaranteeing minimum prices of food grains in order to insure the better interests of the cultivator.

The Government of India have constituted a Central Food Advisory Council as recommended in April 1942 by the "Grow More Food" Conference which will include representatives and special officers of the Government, representatives of the two Chambers of Commerce, two growers' representatives, a zamindar and a planter. It is pointed out that the principal functions of the Council

would be to pool, study and disseminate all available information regarding food and fodder production, to plan on an all India basis the food and fodder production programme for different regions, and to advise the authorities responsible on the equitable distribution of available food stocks

Since food production has become one of the vital major economic problems of the day, it is high time that the Provincial and States Governments initiate a bold economic policy in removing all such handicaps which run counter to improvements in agriculture. The possibilities of extensive and intensive cultivation are to be thoroughly discussed and remedial measures against rack-renting, forced labour, illegal excessive burden of debts, excessive fragments of the holdings, which might prove detrimental to improvements in agriculture, are to be adopted in time, and the actual tiller of the soil is to be assured of the extra profits calculated to accrue from the extra application of his labour and capital.

Roughly, it is estimated that through the combined efforts of the Central, Provincial and States Governments, an extra 70 lakhs acres of land will be brought under food crops during the ensuing Kharif and Rabi seasons in order to raise an additional 17 lakhs tons of wheat, rice, bajra and jowar. It is gathered that the propaganda work to improve the growth of foodstuffs has received good support from the Provincial and States Governments, people who are now working for larger production of food grains will be definitely helping the National War Front movement by safeguarding the vital food front.

During war time a large variety of food supplies is requisitioned by the Army and Defence Services and much capital and labour is diverted to meet this important demand for the fighting forces. The Imperial Council of Agricultural Research has encouraged research work in India to design proper methods of preservation and transport of milk, milk products, animal products, poultry and other essential food material.

The demand for milk and milk products, like milk powder, cheese and butter and condensed milk, which are easy to handle and convenient to transport during active opera-

tions, has greatly increased as a result of the heavy requirements of the Defence forces. Previous to the outbreak of the war most of these articles used to be imported from outside countries some of which are now enemy countries and the rest of them have either to meet their own increased demand for such articles or facilities for importing the same from such countries are not available. In order to meet the increased demand and the shortage of imported milk products, cheese making and condensed milk making factories have been set up as a war emergency measure and India is now exporting large quantities of condensed milk, butter and cheese to fighting forces abroad.

Ghee is equally a nutritious item in the diet of Indian troops and is in much demand at the present time. The Military Ghee Heating Centre at Agra handled 2,213 tons of ghee in 1938-39 and very larger quantities in subsequent years. Good work is being done by the Agricultural Marketing Department of the Government of India under their AGMARK seal and researches are being carried out at the Imperial Dairy Institute, Bangalore, in the methods of making ghee more economically and producing a better quality product.

The present war has also been responsible for the development of poultry industry in India. In view of larger demands for the poultry products, two schemes have been sanctioned for research in poultry breeding and improvement of poultry for table purposes. Poultry disease investigation officers have been appointed in the various Provinces and States for researches in and control of poultry diseases in close collaboration with the Poultry Research Section of the Imperial Veterinary Research Institute. Indian eggs are now exported abroad and it is expected that the scheme relating to the preparation of poultry products for export, such as dried eggs and frozen eggs, etc., will shortly be taken up at the Poultry Research Section, Imperial Veterinary Research Institute, Izatnagar, Bareilly.

In the present mechanized warfare where huge armies carry on mobile operations with great fluidity at great distances from their base there has arisen an insistent

demand for nutritious canned and dried foods. The Supply Department created a Food Directorate in 1940 in order to secure easily transportable canned and processed foodstuffs for the Army and much research work in this direction has been done at the Punjab Agricultural College, Lyallpur.

Large quantities of dehydrated potatoes, canned tomatoes and other vegetables, dried and canned fruits and other such foodstuffs have been already supplied to the troops serving outside the country. Several potato chipping factories have been set up by private individuals to supply potato chips to the Army.

The question of canned fish and the shortage of cod liver oil in this country is receiving the attention of the Government, and efforts are being made to develop the fish canning industry and the manufacture of fish oils from the shark and saw fish which are considered to be a good substitute for cod liver oil.

Over 24,78,000 lbs of biscuits produced in India have so far been supplied to the Defence Services against heavy demands received from abroad.

2. Industries harnessed to war needs

The paramount need of the moment is to gear the industries of this country to the war effort. The soldier of today requires numerous articles to bring him and keep him up in the field. Considering India's limitless resources, our war industries are still in their initial stages of improvement. The systematic steps taken by the Supply Department to harness the economic and industrial resources of the country for the maximum war effort have enabled India to obtain a very prominent position as the supplier of multifarious war stores to several theatres of war.

The war requirements are colossal and comprise over fifty thousand articles, out of which India is supplying in whole or in part to meet its own demands as well as those of the Eastern Group Supply Council over 37,000 articles.

On account of virtual cessation of import of cotton textiles from Japan and of the reduced import from

England, Indian mills have had to meet both the heavy demands of the military as well as the civil population. In view of the inability of the Indian cotton mills to cope with the increased demand, the Government of India have permitted in all cotton spinning and weaving mills throughout India an increase in the weekly hours of work from 54 to 60,—overtime remuneration being paid according to the provisions of the Factories Act.

The largest expansion has been witnessed in the output and supply of textiles and practically all the cotton textile materials required for the Army are now being secured from the mill and handloom industries. As a supplier of clothing, Indian mills can take a justifiable pride in their achievement. Since the outbreak of war India has supplied about $5\frac{1}{2}$ crores garments and production is being speeded up in order to meet the expanding requirements. Under the Supply Department there are now 11 clothing factories as compared with only one at the beginning of the war.

Camouflage nets made of strips and ribbons of jute cloth have been supplied in large quantities and the total output this year is estimated to be about 10 lacs for the Defence requirements and considerable war orders for sandbags and hessian packing have been successfully met by the jute industry. Flax cultivation has been developed in Bihar by the Supply Department in co-operation with the Provincial Government and it is hoped that in years to come this new industry will assume an important role in the industrial development of the country.

The Government of U.S.A. sent a Technical Mission to India to examine and report on the possibilities of American assistance towards industrial development of India. The aim and object of this Mission was to devise ways and means of increasing war production programme in India. It was not the intention of the Mission to help American industrialists, as it was at one time erroneously understood, in establishing factories in India; but their sole desire was to determine the courses in which the available potential resources of the country could be utilized to the maximum for the production of

for Indian timber and woodware, chiefly for the Army and the railways, and so far the Supply Department has made purchases exceeding Rs. 13 crores. During the current year the value of purchases is likely to go higher, as much larger demands are anticipated. The Forest Research Institute, Dehra Dun, is carrying on many researches in finding out local substitutes or supplies of articles which used to be imported before the commencement of the war. As a result of researches carried on Indian woods have been found suitable in aircraft construction and large quantities of Indian aircraft quality spruce are now being used in aircraft construction. Indian bamboo poles are being tried in the aircraft works to replace Japanese bamboo poles. Fibre-board cases for packing petrol tins, army boots, ghee and other articles have been designed for the Army requirements.

The possibility of further expanding India's capacity for the manufacture of army boots to meet the growing demand is at present under consideration. It is estimated that the capacity for machine-made boots can be increased to $5\frac{1}{2}$ million pairs and if the bazar production be improved with the adequate supply of leather, the supplies are expected to reach $8\frac{1}{2}$ million pairs of boots.

Schemes to increase production of small-scale industries in order to meet the increased requirements of the Department of Supply were fully discussed at New Delhi in March 1942 with the representatives of the Supply Department, Provincial Governments and some of the important States. It is expected that additional orders for the manufacture of small-scale industry to the extent of Rs. 7 crores will be placed in the year 1942-43, as against Rs. 5 crores in 1941-42. It was also agreed at the Conference that all Provincial Governments and States participating in the scheme should establish official agencies with whom the Department of Supply would contract for the supply of certain goods which can suitably be manufactured by the small-scale industry and the Government of India will give all possible help including financial assistance, if required, to the Provincial and States Governments.

3 Munitions Production in India

The present world war is mainly a mechanized war, wherein enormous numbers of bombers and fighters, heavy and light tanks, armoured vehicles, anti air craft machine guns, U Boats and submarines, destroyers, battle ships and aircraft carriers are being employed in a highly deadly struggle and which play an important and decisive part in the decision of the battles now conducted on land, sea and in air

During the second year of the war new projects for the expansion and modernization of Ordnance factories, establishment of an aircraft industry, revival of the ship building industry and for an all round expansion in the range and output of arms and ammunition have been undertaken in the field of munitions production in India with a great deal of success

The growth and expansion of Indian Army depends upon the extent of increase in the armaments. In order to augment the supply of arms and ammunition many railway and trade workshops were adopted for munitions production and their achievement has really been splendid. In October 1941 the Ministry of Supply Mission under Sir Alexander Roger came out to India to explore the possibilities of armament production and as a result of this Mission's recommendations which were discussed by the Eastern Group Conference about 20 new munitions projects have been established in India at a total cost of about Rs 11½ crores. These projects have led to important expansion of the existing Ordnance factories and include the reconditioning of an old factory for the manufacture of anti gas respirators, machine gun tripods and air bombs, and the establishment of several new factories for guns, shells, mortar bombs fuzes, cartridges cases, small arms ammunition, filling and scientific instruments. The production of field guns, various types and calibres of shells, high explosives, pyrotechnics, grenades, rifles and bayonets and light machine guns is now carried on in Ordnance Factories and in railway and civil workshops with great success and efficiency. Armoured vehicles like armoured cars, carriers, lorries and field artillery tractors of improved type have been built and

sent for military service abroad. In the mechanical and A. R. P. section also, a large number of equipment, tools and components are being manufactured. A factory for the manufacture of parachutes has also been established.

Since the outbreak of war, various measures have been taken by the Government of India and licences issued to a large number of firms for manufacturing tools of various types, because the Ordnance factories have requisitioned the provision of thousands of machine tools. About one hundred licensed firms are now engaged in the production of machine tools ranging from small simple tools like twist drills, pick axes, milling cutters, etc., to high class machines, such as cold saws, horizontal borers, production millers and thread millers. The latter are mostly manufactured by the Railway workshops. The Tata Iron and Steel Industry is producing every month about 50,000 tools of various types required for munitions production. The Government of India have recently sanctioned a scheme costing Rs. 15 lakhs calculated to increase further the production of the high class machines and thus the foundation of a machine tool industry has been laid down for supplying India with tools and machines which used to be imported hitherto.

An aircraft industry known as Hindustan Aircraft Ltd. was established for the first time in India in 1941, but, in view of the financial risks administrative complications, the Government of India, after a very careful consideration, have taken over Hindustan Aircraft Ltd., for the period of the war. The factory is still an assembly plant working from imported parts and is likely to remain as such for some time. It is, however, expected that with the skilled labour which is now being trained, it may be possible to manufacture some of the components of aircraft from the materials available in India. At the present time, two types of American aircraft, the "Harlow" a training machine and the "Curtiss Hawk" fighter, are produced and it is also hoped that the aircraft factory will be equipped to carry out major repairs of aircraft in India. Attempts are being made to produce high octane-value aviation spirit from Indian sources. The Indian Air Force is now being gradually developed

and the I A F pilots are successfully pounding enemy positions on the various fronts in Burma and elsewhere

For a long time the ship building industry in India was neglected by the Government of India in spite of several representations from the Indians. However, in view of the large and insistent calls made upon the British Navy by the present war and the multifarious duties which the Royal Navy has to discharge in the various seas, the need for developing a separate Indian Navy was keenly realized and the Government of India launched a ship-building programme on the recommendation of the Eastern Group Conference in 1940. It was realized that India possesses considerable quantities of materials required for the ship building industry excepting engines and boilers which could be imported from the United Kingdom and elsewhere. The ship-building programme was framed with these considerations and orders for the manufacture of various types of naval vessels were placed with the various civilian ship building yards in India.

Indian ship-yards are now fast building for the Royal Indian Navy mine sweeping trawlers, motor-mine-sweepers, fast anti submarine boats, motor launches, life-boats, tugs and other craft. Over 300 such naval vessels of various types required for use in war are under construction and about 30 000 workmen are now employed in the various ship building and repairing yards in India. About 4,000 sea going ships have been repaired in the Indian yards since the outbreak of the war. A ship-building yard has also been opened for the construction of large merchant vessels. The work of constructing several floating docks for the Admiralty has also been taken in hand. As a result of these measures, the Royal Indian Navy is being daily expanded and the Units of the R I N are serving now in distant waters besides guarding their own coasts and waters.

Undoubtedly, considering the extensive coastline of the country for purposes of defence and navigation, the Indian ship-building industry is still in its infancy, but the recent developments certainly mark a substantial advance on the pre-war stage. Before the war India

had no ship-building programme and the ship-yards were mainly engaged in the repairs of sea-going ships and construction of small steel and wood vessels for inland river service.

An automobile industry in India at the present time would have been the source of colossal strength to the Allied Powers. And one cannot see why this factory has not yet been established despite our industrialists' offer.

4. Industrial Research

In view of the huge constructional programme for the armament production, the Industrial Research Utilization Committee which met in New Delhi in February 1941 discussed the whole subject of exploitation of industrial research required especially in connection with war supplies. It was decided that in regard to research schemes applications should be invited from those interested in the development of such research schemes and in selecting the individual concern or concerns their financial resources, technical skill and other facilities available to them, like proximity to raw materials and markets and financial terms relating to royalty may be taken into consideration.

The Board of Scientific and Industrial Research has recommended 14 research schemes involving a financial assistance of Rs. 52,000 for adoption to the Government of India and has decided upon several schemes of industrial research calculated to advance industrial development of the country. The Board is also of the opinion that Internal Combustion Engines could be manufactured in India provided certain essential tools could be available here from outside.

The Industrial Research Utilization Committee also approved the publication of a Journal called "Indian Industry" under the auspices of the Committee which contains information regarding industrial research and its utilization.

5. Technical Training Scheme

In order to meet the expanded requirements of the huge armament production programme and furnish other

war materials and supply to the Defence services a trained personnel which is so essential in modern mechanized warfare, the necessity for skilled and semi skilled labour was keenly felt by the Government of India from the very beginning of the war. At the request of the Government of India, the Railway Board agreed in 1940 to trainees being sent to the workshops of various Railways for the training of additional skilled labour in connection with the war effort. The trainees come under the following different groups: Fitters, draftsmen, machinists, millwrights, toolmakers, turners, welders, etc., etc. Many civilian workshops and factories have also been harnessed by the Government of India for the purpose of training workmen on joining training centres. Candidates get monthly stipends from Rs 20/- to Rs 25/- and are required to hand over to the Head of the Centre a signed undertaking to undergo training and after completion of training, to accept such employment as may be found for them. After they have finished their training courses, these candidates are sent to the factories employed for munitions production or other war work.

The responsibility of training skilled and semi-skilled labour has been entrusted to Supply and Labour Departments. Over 10,000 technicians have been trained under the Technical Training Scheme of the Government of India and the Department of Labour has in view the training of about 48,000 workmen by the end of March, 1943. There are now 337 training centres in various railway and civilian workshops and factories, and about 25,000 workmen receiving technical training. There has been a considerable demand for Instructors and 100 Instructors have been recruited from England for supervising the technical training scheme of the trainees.

Under the Bevin Tevin Training Scheme, Indian "Bevin boys" are sent to England in batches of 50 at regular intervals for about nine months' course of intensive training in different engineering trades according to their aptitudes. These "Bevin boys" are skilled technicians and as a result of getting their fresh advanced training first in a Government training centre and after-

wards securing a first-hand experience of the workings of the English factories, they become a valuable asset on their return to the Indian factories working for munitions production and other war supplies. These "Bevin boys" have been called the "ambassadors of industrial India;" and while in England they not only try to assimilate up-to-date industrial methods and practices but they are also afforded opportunities of acquiring a first-hand knowledge through their constant contacts with British workmen of organized trade unionism and the relations existing between the workers and employers in the United Kingdom.

The Government of India have recently started a Polytechnic at Delhi for the training of technical personnel in connection with the war effort. The main functions of this Institution will be to provide vocational instructions in a variety of subjects for many types of students. As the Polytechnic develops, four main branches of educational activity are expected to emerge —

1. A Technical Training High School for pupils from 10-11 to 16-17 years of age.
2. Senior Vocational Department for students over 17.
3. A Village Industries Department for the sons and daughters of village and bazar craftsmen.
4. Adult education of various types.

Under the Labour Department Technical Training Scheme, the Delhi-Polytechnic provides for the training of fitters, turners, machinists, electricians, tin and copper-smiths and painters. The Polytechnic has been designed to provide with 16 workshops, 4 for the immediate use of the Polytechnic and 12 for the technical training scheme.

Thus, a long-felt want in the Indian industrial world of trained technicians and skilled workmen has been realized and this vast army of skilled workers can be diverted without much difficulty to the peace-time requirements making the country less dependent to that extent for her industrial expansion and development after the termination of hostilities.

6 War Risks Insurance

The Government War Risks (Goods) Insurance Scheme which provides for all sellers of goods whose stocks in any one district are valued at Rs 20,000/- or more, came into force on 1st October 1940 and compulsory insurance throughout India took effect from 1st November 1940

The provisions of this scheme generally apply only to commodities and not to immovable property though there is a list of some items which have been declared "not insurable" under this scheme. The Government of India have appointed 103 Insurance Companies to act as their agents under this scheme and those applying for a Policy have to apply on the prescribed form to one of these agents. The Government of India have also appointed special officers in the provinces to see that all goods subject to compulsory War Risks Insurance under the Ordinance are in fact being so insured.

The Government of India have also promulgated an Ordinance for the establishment of a War Risks Insurance Scheme to cover all damage to the buildings, plants and machinery of factories caused by the enemy or in combating the enemy. Under this Ordinance the insurance scheme will apply compulsorily to all factories situated in British India and a noteworthy feature of the scheme is that damage resulting from destructive measures taken by or under orders of Government with a view to denying facilities to the enemy will also be covered. According to the provisions of this scheme, the premium payable will, in the first instance, be a single premium of 4 per cent of the actual value of factory buildings, plant and machinery, payable in instalments, cover being provided up to 31st March 1944 and the Government's liability to pay compensation will be limited to 80 per cent of the damage.

7. Railways and the War

Since the outbreak of war, enormous changes have been made on all Indian Railways. On heavy odds they have rendered and will continue to play an important part in the production and transport of munitions and other.

small magnitude to convert the railway workshops to a war time economy and it must be said to their credit that they have responded magnificently to the diverse demands made on them.

About 16,000 workmen are engaged on the production of war materials in the Railway workshops from where is now flowing a constant stream of high explosive shells, hand-grenades, fuse components, bits and stirrups, tent poles, cartridge boxes, packing cases for gun cotton, axles and axle trees for gun carriages, field ovens, pick-axes, nuts, bolts, etc. for transport carts, instructional tank turrets, bayonets, rifle aiming rests, mathematical instruments, furniture and the components of a host of other items. Large numbers of motor bodies and armoured tractors have also been manufactured and items which had never been attempted in any workshop, other than Ordnance factories specially equipped for this kind of work, are now being successfully produced by Railway workshops. A few workshops have been entirely released for the production of armaments and munitions and all the other workshops are used to their full capacity in the production of munitions of various kinds in addition to their normal work required for satisfying essential railway needs. A new Tool Room has been constructed in one of the workshops for the manufacture and repair of tools, gauges, fixtures, etc., required for the manufacture of munitions, and a special Shell Section has also been started. In one Railway workshop alone, the turn-out amounted to Rs. 40 lakhs up to the end of October 1941. Thus the volume and variety of work turned out by the workshops have been very considerable.

Besides the programme of war production, the Railways have been asked during the last one and a half years to surrender their large quantities of railway track, rolling stock and stores for military operations overseas. As stocks of spare rails were limited, it became necessary to close down and dismantle some of the uneconomic branch lines in order to release the requisite quantities of track for war purposes. In addition to the rails, about 200 Locomotives, thousands of railway wagons, bridge girders, signalling and interlocking material, tools etc.,

have been withdrawn for despatch overseas for India's far-flung lines of defence

Inside the country, a large variety of rolling stock was converted for defence purposes. Passenger coaches and dining cars are now used as ward cars, kitchen cars and ambulance trains. In addition to sending large quantities of rolling stock overseas, Railways were called upon to construct new military depots in India for the Defence Department involving many miles of rail track.

Throughout the war the railways have had to meet a heavy demand for special trains for the transport of troops, war materials and prisoners of war which of necessity have had to be given priority. In 1941 the Railways arranged for 2,000 special trains for the carriage of troops and prisoners of war, besides of course additional carriages, trucks and wagons being attached to numerous ordinary trains. Despite this fact, the stock required for a Defence Services Exhibition Train equipped with 23 vehicles has been provided in order to show exhibits from all branches of the Defence Services.

Conservation of metal and material is being achieved by the strictest economy in use, timely and economical repair, utilizing, wherever possible, obsolete and scrap material by modification or conversion, intensifying the use of substitutes and reducing demands to an absolute minimum commensurate with safe and efficient running. Sales of scrap material have been almost entirely suspended.

It will not be out of place to mention here that the situation regarding the rolling-stock of railways in respect of wheels, tyres and axles, which used to be imported into India before the commencement of the war, has been considerably eased by the establishment of a new plant at Jamshedpur by the Tata Iron and Steel Company Ltd., for the manufacture of wheels, tyres and axles to meet the entire requirements of the Indian railways. The Commonwealth Steel Company of Australia has trained two officers of the Tatas in their Company in the methods of manufacture of wheels, tyres and axles.

and also loaned two of their technical experts to guide the operations of the plant.

The Railways have agreed to increase the rates of fares for passenger and goods traffic and lesser number of passenger trains are now being run and special trains for the civilians have been suspended for the duration of the war. The strain has been so stupendous that the Railways have been forced to launch a "Less Travel" campaign by blazoning all sorts of slogans at the station platforms and in the railway carriages to reduce the travelling by the civilians to the minimum.

In view of the rise in the cost of living, the Railway Board has sanctioned in 1941 enhanced dearness allowance to its employees.

8. Special Control Measures regarding Price Control and Rationing

One of the inevitable consequences of any war is a general rise in the price-level. This rise in price-level in India was felt all the more acutely because there was a long spell of depression before the commencement of the war. There ensued a severe agitation from a section of the articulate public urging upon the Government of India to formulate a policy to deal effectively with the rising prices and to stop "profiteering" by merchants and traders. The protagonists of agricultural interest claimed that a Government which had done nothing to increase the price-level during the entire decade of acute depression had no moral or even economic justification to decrease the price-level when the opportunity had come to their doors to retrieve their dilapidated economic status. But the Government of India soon delegated powers to the Provincial Governments to take suitable action in regard to the controlling of prices of such articles as foodstuffs, coarser kinds of cloth used by the poor, etc.

Since then, the economic position of India has undergone considerable changes. Exports have decreased in some articles and increased in others to a considerable degree as also the imports, and India has become the supply centre of war materials to the Allied Powers and the development of war industries is causing a shifting

of population and consequently of consumer demands. Due to the cutting off of supplies from the enemy or enemy occupied countries, the burden of locating and manufacturing supplies has fallen to the shoulders of our country and the Government of India have ever been anxious to supply such materials to the various theatres of war and take all possible measures for the total resources of this vast and mighty country being mobilized for victory. Apart from that, the main problem before the Government of India has been to take all possible measures against any disorganization and to ensure that public is not put to any undue hardship in obtaining their supplies of the essential food-stuffs and other necessities of life. Various effective checks and special legislative measures have been undertaken or are being undertaken as and when circumstances demand to price-racketeering in those commodities which have become scarce and are essential to life and special control measures adopted in other commodities for the war needs.

In view of the acute wheat shortage felt in the early months of 1942 throughout India when stocks of wheat were hoarded by the speculators and prices shot up and were kept up at high levels, the Government of India have, after consulting the wheat growing provinces, now arranged the distribution of the new crop of wheat and have made plans to regulate its supply throughout the year and have fixed Rs 5/- per maund as the maximum wholesale price of wheat at Hapur and Layallpur. Ample powers have been given to the Government of India and the Provincial Governments under the Defence of India Rules to control and regulate the prices of essential food-stuffs.

In order to make provision for the grant of relief in respect of injuries sustained during enemy action, the War Injuries Ordinance 1941 was passed. Under the Ordinance the Government of India have framed a War Injuries Scheme and War Injuries Regulations. The scheme provides for relief to "gainfully occupied" persons above the age of 15 who sustain war injuries or to their dependents in the event of death. It also provides relief for injuries sustained by Civil Defence Volunteers in the

discharge of their duties as such volunteers. The scheme provides for free medical treatment to injured persons and for different kinds of allowances and pensions under three broad heads of temporary allowances, disability pensions, and family pensions and children's allowances.

The policy of exempting factories on war work from restrictions on working hours with a view to increasing their output, has been approved by the Government of India.

To prevent wasteful expenditure of essential commodities and stocks and to put them to the best possible use in the interest of war supplies, a number of control measures have been introduced by the Government. In order to put to the best possible use the machine tools available with traders and to produce machine tools of the useful type for munitions production, the Machine Tool Control Order 1941 requires the taking of a licence for the import, production, keeping for sale and acquisition of certain types of machines and tools.

The Non-Ferrous Metal Control Order 1941 provides for the control of nickel, zinc and electrolytic copper. Stock holders and dealers are required to obtain a licence for dealing in these commodities.

The Iron and Steel Control Order 1941 applies to the main types of iron and steel produced in India. The general effect of the Order is to prevent the acquisition or disposal of iron and steel by anybody except under the authority of a Permit. The producers and the stockists are required to keep accounts of their sales.

Under the Essential Drugs Order 1941 any person engaged in the business of manufacturing, importing or selling essential drugs is required to submit a monthly return showing the quantity of any essential drug in his possession.

In order to conserve supplies of tar and bitumen in India, the Central Government promulgated in January 1942 the Tar and Bitumen Control Order 1942 according to the provisions of which all producers of or dealers in tar and bitumen have been registered by obtaining their licences from the Director General of Supply,

Petroleum Directorate, New Delhi, and no one is entitled to sell or otherwise dispose of these articles without obtaining the proper sanction of the Licensing Authority. This Order has been passed for releasing supplies for Defence works.

A Rubber Control Order which came into effect from 1st April 1942 brings under Governmental control all stocks of rubber in the hands of manufacturers in India and restricts its sales without a Permit. A fee has been fixed for each Permit at the rate of annas two and six pies per 100 lbs. of rubber. A Control has also been put on the sales of tyres and tubes used by Motor Vehicles.

In view of the recent developments and the apprehended shortage in the supply of lubricating and other oils, the Government of India have decided to ask the Oil Companies in India to regulate their sales in accordance with the scheme prepared by the Government. The Motor Spirit Rationing Order conserves all supplies of Petrol and other Oil products. This Order pays special attention to the maintenance of essential services and gives a fair quantity of petrol to private consumers.

The Commerce Department is taking steps to institute an economy drive among the general public and in Government offices to bring about the greatest economy in the use of paper which has become scarce due to the difficulty of imports. A notice "USE LESS PAPER" was circulated recently by the Paper Economy Officer and the Governmental requirements are intended to be curtailed to the extent of 5,000 tons a year in spite of the increase in the size and work of Government Departments.

The prices of all newsprint paper and other types of paper have been fixed by the Government. The number of pages issued by the newspaper in India have also been curtailed considerably and the publication of various Governmental publications has been considerably reduced in number.

Experiments have been carried out at the Forest Research Institute, Dehra Dun, for the manufacture of suitable pulp for newsprint. It is expected that substan-

tial quantities of newsprint paper might before long be manufactured by the Indian paper mills.

The Sugar Control Order 1942 has fixed the prices of sugar in the Indian market and has also controlled the production and distribution of sugar.

The Price Control Conference which met at New Delhi in April 1942 discussed the various aspects of fixing prices of some important and essential commodities and advised the Provincial Governments to take necessary steps in this connection. It also recommended the licensing of wholesale dealers (or purchasers from primary producers) in food-stuffs by the Provincial and States Governments who will be required to furnish from time to time information to the Governments concerned regarding the course of distribution of the food-stuffs handled by them, including particulars of the areas of distribution.

9. Post-war Reconstruction in India

War brings in its train the inevitable dislocation of a country's economic and particularly industrial life but peace brings an equally great and more sudden dislocation of the existing conditions.

Industries that are now being given all the impetus for their rapid development and expansion in order to produce the required quantity of war materials will no longer be engaged upon urgent war contracts, labour in those particular industries will become redundant, stocks and materials will become surplus and their disposal will have to be arranged. The labour and capital now employed whole time in the production of war equipment will have to be re-adjusted and diverted to the peace-time requirements after the termination of hostilities and in general a peace-time industrial economy will have to be evolved.

In order to avoid such economic panic and industrial chaos, the Government of India have accordingly appointed a Reconstruction Committee, to be presided over by the Hon'ble the Commerce Member with representatives of all the connected Departments of the Government of India to devise a plan for post-war industrial reconstruction.

The first meeting of the Reconstruction Committee took place on the 23rd June 1941 at Simla and in order to avoid any misunderstanding as to the powers of the Committee, it was decided to change the title of the *Reconstruction Committee* into that of "*Reconstruction Committee (Coordination)*"

The following four Planning Committees were set up which include representatives of Departments of the Central Government, representatives of Provincial and States Governments, Commercial and Industrial representatives and representatives of labour according to the nature of work involved in each Committee —

1 Reconstruction Committee (Labour and Demobilization)

2 Reconstruction Committee (Disposals and Contracts)

3 Reconstruction Committee (Public Works and Government Purchases)

4 Reconstruction Committee (Trade, International trade policy and Agricultural Developments)

A Consultative Committee of Economists drawn from the various Universities has also been set up by the Government of India. It is intended that all these Sub Committees will submit their reports to the Reconstruction Committee (Coordination) and their recommendations will be considered by the Governor General in Council and such action as may be considered necessary taken thereon.

Amongst many important problems of post war reconstruction, the Sub Committees will be required to consider how far labour employed at present in Ordnance and Clothing factories, Engineering, Textiles, etc, can be employed in other directions without retraining, what arrangements are necessary to prevent the economic structure from being collapsed by a sudden stoppage of war production, what measures will be necessary to protect the interests of those industries which have now seen considerable improvement, expansion and efficiency and in what manner some chief crops such as wheat, cotton,

oil-seeds and sugar and agriculture in general could be made immune from the scourge of another depression.

In other countries too, a good deal of thought is now devoted as to the problems of post-war reconstruction. This problem is no doubt fraught with insuperable difficulties and it is too early to forecast the economic system of the future. But it is certain that the problems of under-consumption, unemployment within the nations, and economic belligerency between the nations resulting in the struggle for "capturing markets," will have to be seriously considered in all their aspects and remedied in any scheme of economic reconstruction in order to ensure a more durable peace and co-operation between the nations.

APPENDIX II

Some Important Questions

A—INTRODUCTION

- 1 ✓ Economics has been defined by some writers as the science of wealth. How far this definition is adequate? Discuss it fully.
- 2 What are the chief divisions into which the subject-matter of Economics is geneally divided by writers? Discuss their inter relation.
- 3 What is Economics? How far is the study of Economics helpful in practical life?
- 4 If you had to define Economics to an intelligent but uneducated peasant, how would you set about it?
✓ Distinguish between individual and social wealth and state what you mean by Economic goods.

B—CONSUMPTION

- 1 ✓ What are the chief characteristics of Human Wants? Explain and illustrate the distinction between necessities, comforts and luxuries. Give examples from India.
- 2 State and explain, with the help of a diagram, the Law of Diminishing Utility. Are there any exceptions to this Law?
- 3 What is meant by Elasticity of Demand? Why is the Demand for some commodities more elastic than for others? Explain fully.
- 4 What is the relation of Saving to Spending? Is it of any consequence to society how an individual spends his income? Should society interfere with a man's liberty in spending money?

5. Clearly explain what you understand by the term 'Consumption' and give examples of different types of consumption.

Consumption is regarded by some as the goal of economic activity and by others as a means of restoring energy, which view in your opinion is correct? Give reasons.

6. What practical advice would you give to a coolie or an Indian peasant who may seek your guidance in the matter of regulation of his expenditure?
7. State clearly the Law of Satiability of Wants. Can you deduce from it any law for guidance of people's expenditures? State by an example.
8. Distinguish between a high standard and a rational standard of living and estimate the importance of the standard of living to consumption.
9. "To raise the standard of life of the people of India wants should be multiplied, even if some of these wants are not of a beneficial nature. Without this progress will not be possible." How far do you agree with the view expressed herein?
10. State the effects and importance of habits and customs of the people of India on their economic life.
11. Write short notes on the following:—
(a) Consumer's Surplus; (b) Engels' Law of Consumption; (c) Economic waste; (d) The standard of living; (e) Total utility and marginal utility.

C—PRODUCTION

1. India has abundant natural resources, a plentiful supply of labour and large amount of inactive capital. Discuss fully what fruitful opportunities are available to enterprise in India and to mobilize the productive resources of the country. Give examples.
2. What are the chief means of artificial irrigation in India? Explain fully the chief economic advantages of canal irrigation in the United Provinces. How is it that some canals bring profit to the Government while others are run at a loss?

3. What are the chief sources of power available in India? What would be the effect of development of Hydro-electric works on rural industries and agriculture, in these provinces?
4. Give an account of the soils and climates of India and explain their effects upon the economy of the country.
5. Describe the types and extent of irrigation facilities in these provinces. How far can they be extended? Can the tube-well scheme of the Government satisfy the needs of the Indian cultivator?
6. To what extent is India fitted by Nature for industrialization? From this point of view briefly describe India's Natural resources.
7. What are the chief recommendations which you would suggest for the improvement of our village industries?
8. Draw a map of India showing the distribution of principal crops, minerals and modern industries.
9. What do you mean by the term density of population? Account for the variations in the density of population of the different Provinces of India.
10. Carefully explain Division of Labour. How does it arise? What are its advantages and disadvantages? Give examples.
11. What do you understand by 'efficiency of a factor of production'? Do you think the factor of production—labour in India is efficient? If not, what proposals would you make for making it efficient?
12. What are the chief causes of the inefficiency of Indian labour? How and to what extent can they be removed?
13. Examine the causes of the high infantile mortality rate in India. What forces are at work to check this evil? Do you think India is overpopulated? If so, what remedy would you suggest to keep the population to the level of the means of subsistence?
14. Define the term capital and distinguish between fixed and circulating capital. How do you account for the scarcity of capital in this country?

What are the chief factors upon which the accumulation of capital in a country depends and examine to what degree these are fulfilled in our villages?

Explain and illustrate the Laws of Diminishing and Increasing Returns and give the importance and limitations of each.

Discuss the advantages and disadvantages of a large- and a small-scale of production. Which form of production would you like to see developed in your own country, and why? How far large-scale production is applicable to Indian Agriculture?

What are the functions of an entrepreneur in modern industry? How far are these functions performed by the village artisans in India?

What do you understand by the term localization of industries? Give the main causes of localization and trace its advantages and disadvantages.

If you were given the choice of developing either the means of communication or irrigation in India within the next decade, which policy would you adopt? State clearly the reasons for your preference. Tell what changes in rural industries and agriculture result from cheaper and quicker means of transportation.

Discuss the influence exerted by the introduction of machines on the efficiency of production as well as the quality of human life. Illustrate your remarks with special reference to Indian factory labour.

Write short notes on :—

- (1) Free Goods and Economic Goods. (2) Skilled and unskilled labour. (3) Positive and preventive checks. (4) Extensive and intensive cultivation. (5) Internal and external Economies.

D—EXCHANGE

What is the importance of exchange? Show that both parties gain in utility by exchange. Are there any circumstances under which such a gain would disappear?

- 2 What causes bring about an extension of markets and with what results? Distinguish clearly between short and long period markets
- 3 Differentiate between market price and normal price. State how the market price of a commodity say cotton is determined
- 4 Explain value and discuss that 'there can be no general rise in values and no general fall in values'
- 5 Describe the marketing of one of the principal crops in your district by the Rayot. Is he unable to hold up his crop for a better price? If so, for what reasons?
- 6 The value of a commodity is normally equal to its cost of production. Does this mean that it is the cost of production of a commodity which gives it its value, so that if there were no cost of production, there would be no value? Explain, how cost of production affects value?
- 7 Discuss the following statements —
 - (i) 'The value of a commodity cannot be permanently much above or below its cost of production'
 - (ii) "The demand for a given quantity of a commodity is governed by the marginal utility of that quantity"
 - (iii) "Value tends towards the cost of production in the long run"
 - (iv) "If price rises demand diminishes, but if demand diminishes price falls. It is difficult to see how price ever changes"
 - (v) "Value depends wholly upon the relation between demand and supply"
- 8 What are the essentials of value and what regulates the value of agricultural produce and manufactured goods?
9. Describe exactly the meaning of increase in demand, illustrating your answer by a table of figures or by a diagram. Is it possible, under certain circumstances, for the demand to increase and yet the market price to remain unaltered? If so, explain the circumstances

10. What is meant by the equilibrium of demand and supply? Explain and illustrate demand and supply schedules and give their uses.
11. Explain the conditions in which barter is possible. Why does sale for money take the place for barter?
12. Explain the meaning and functions of money and point out the reasons for which precious metals have been chosen as mediums of exchange.
13. What is the standard of value in India—Gold or Silver? Is it necessary that the standard of value should also serve as a medium of exchange?
14. "A great feature of modern commerce is the economy in the use of metallic money." Explain this and show how this economy is possible and point out the dangers of such a system.
15. Discuss fully the Gresham's Law and explain its working.
16. What do you mean by paper money? Point out its advantages and limitations. What are the necessary safeguards to its use. Illustrate your answer with reference to the Indian system.
17. What is credit money? Trace out its drawbacks and distinguish between a bill of exchange and a cheque.
18. What are the proper functions of a Bank? What is the difference between a modern Bank and an indigenous Bank? Enumerate all kinds of businesses which the latter transacts.
19. Explain—"A sound and widespread system of Banking is essential to the full economic development of a country."
20. (a) What are the different classes of banks in India? Enumerate their functions with special reference to the Reserve Bank of India.
(b) What are the main causes of rural indebtedness in India?
21. Do you think that the extension of Co-operative Credit Societies would solve the problem of rural indebtedness in India?

- 22 Write short notes on the following —
- (1) Debasement and deterioration (2) Inflation and deflation (3) Single and double standard (4) Seigniorage and brassage (5) Free and gratuitous coinage (6) Gold standard and gold bullion standard (7) Standard coin and token coin (8) Appreciation and depreciation of currency (9) Fiduciary paper money (10) Hundi and Bank draft (11) Convertible and inconvertible notes. (12) Index numbers
- 23 Write a note on the nature of India's import and export. What are the principal countries with which India trades? What is the share of the British Empire in the foreign trade of India?
- 24 What are the advantages of credit to modern commerce and industries?

E—DISTRIBUTION

- 1 Explain carefully what you understand by distribution? Are wages determined more by the productivity of labour or by the cost of production of labour?
- 2 How far do you think Indian social customs prevent wages from rising and falling in accordance with the efficiency of the labourer? What effect has the standard of living on the determination of wages?
- 3 State the Law of Rent. How does the rent arise and how is it measured? What forces bring about a rise in rents?
- 4 Establish the proposition that rent forms no part of those expenses of production which affect price. Do you think there would be no rent if there is no Law of Diminishing Returns?
- 5 Give an account of the system of land tenure in the Province of Agra. "The object of the Government is to secure for the cultivators fixity of tenure and fair rents—" How far has the above object been secured by the present tenancy legislation in the United Provinces?

6. Would there be Economic rent, (a) if the Government owned all the land, (b) if land were owned by the cultivators, (c) if the supply of better land were practically unlimited?
7. Analyse profits into its various constituents. Is it necessary that there should be profits? What function does profit perform in industry?
8. Discuss the relation between the rate of interest and the growth of capital and discuss how interest is determined?
9. Why rate of interest differs from place to place, from time to time and from man to man? How rate of interest affects saving?
10. Write short notes on :—
 - (a) National-Dividend. (b) Unearned increment. (c) Gross and net interest. (d) Pure and gross profits. (e) Real and nominal wages. (f) Economic and contract rent. (g) Profit per turnover and profit per annum.

F—PUBLIC FINANCE

1. Name the main sources of income and expenditure of the Provincial and Imperial governments. Give approximate figures and comment on each item.
2. Give the important sources of income and items of expenditure of any Municipal Board or a District Board in the United Provinces. Do you think the income of each of these Boards is sufficient to meet their requirements?
3. Explain direct and indirect taxes and outline their merits and demerits. What are the principal canons of taxation?
4. Are there any taxes on profits in India? Who bears the burden of these taxes? Are they partly or wholly shifted?
5. What is the incidence of a tax? Who bears the following taxes?
 - (a) Sugar tax; (b) Cycle tax; (c) House tax; (d)

Circumstance and property tax, (e) Excise tax on matches

6 Explain the following —

- (a) Excise duties, (b) Import and export duties (c) Ad valorem and specific duties, (d) Protective and revenue duties, (e) Proportional and progressive rate of taxes, (f) Poll taxes and octroi duties

G—PRACTICAL WORK

1. Classify under general heads the monthly expenditure of a college student living in the city and getting Rs 40 per month from his father who is at Budaun. Represent the Budget by means of a diagram
 2. Write very briefly but clearly the different processes of production of any commodity produced by a farmer or an artisan
 3. The selling price of 2 doz chairs is Rs 120. Distribute this amount among the different items of cost of production and represent the classification by means of a graph.
 4. Prepare the cost of production chart of any commodity which you have investigated and represent your final statement of costs by means of a diagram
 5. The following is the statement showing the expenses of production of potatoes on a land of 5 Bighas Kham in size — Rent for the year Rs $11\frac{1}{4}$, oil for the plough -/2/6, repairs of tools /5/-, commission Rs $1\frac{1}{9}$, tax at the bridge /10/-, weighing charges -/10/-, freight charges to Railway Rs $4\frac{1}{11}$, thela charges Rs $2\frac{2}{3}$, manure Rs $12\frac{1}{8}$, bullocks feeding Rs $3\frac{1}{7}$, wages for manuring and digging Rs 10, depreciation of tools /7/6, interest paid Rs $3\frac{1}{2}$, miscellaneous costs Rs $1\frac{1}{14}$, watering tax Rs $2\frac{2}{3}$. Total production 8 maunds of potatoes per bigha, sold at the rate of Rs 3 per maund
- (a) You are required to calculate the cost of production of potatoes on one bigha only and to place the different heads of expenditure under suitable headings,

(b) Represent the different heads of expenditure on the graph paper after calculating the profits.

6. A establishes a sugar factory with a capital of Rs. 50,000. At the end of first year of working, he finds he has got in hand from the sale proceeds of sugar etc., a sum of Rs. 12,000, after paying the wages and the price of raw materials. Under what heads should the amount be apportioned and why?

7. The following are expenses of a coolie :—

Ata -/3/- a day ; pan -/6 a day ; wood Rs. 2 a month ; oil and ghee Rs 2 a month ; rice -/6 a day ; a pair of shoes Rs 1/8 a year ; tobacco -/3/- a week ; house rent Rs. 3 a month ; sweets -/8/- a month ; vegetables -/6 a day ; municipal tax Rs. 1/14 six monthly ; sweeper -/4/- a month ; cinema -/10/- a month ; charpai Rs. 1/8 a year ; kerosene oil -/2/- a week ; dhoties Rs. 2/4 a year ; salt -/2/- a month ; other clothes Rs. 3/12 a year ; country liquor Rs 2 a month, religious and social expenses Rs. 6 a year ; debt payment Rs. 2 a month ; books -/5/- a month.

Calculate all expenses on a monthly basis and classify the items under general heads and represent your classification by a diagram. (A month should be reckoned of 30 days or of 4 weeks).

8. A sugar mill company produced 100,000 mds. of sugar in the year 1935-36, and sold the produce for Rs. 9 lakhs. How will the proceeds be divided? Illustrate your answer by means of a diagram on the graph paper.

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